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ABSTRACT

This report discusses the education and empowerment of Hispanic Americans, stressing the importance of expanding access to educational opportunity from preschool through graduate and professional school. The report focuses on closing the educational and opportunity gap faced by Hispanics in the United States. After an introduction, "A Hard Look at Where We Are Now," the first section discusses "Education and Hispanic Economic Opportunity." The next section presents "Where the Jobs Are," examining various types of jobs. The third section discusses "Earnings and the Hispanic Education Gap," examining educational achievement and attainment, education and earnings, job types, immigration and the economy, education and unequal pay, the importance of academic skills, the educational domino effect, and the importance of nonacademic skills. The fourth section examines "Skills and the Hispanic Employment Outlook through 2006," discussing the various skill levels and noting policy implications. The fifth section examines "Hispanic College Participation, 1995-2015," discussing challenges and increased access for traditional and nontraditional students. The sixth section highlights "Policy Priorities," including money matters, affirmative action and beyond, reinventing assessment, and supporting bilingual education. The seventh section discusses "A Strategy of Engagement," including enhancing social capital, reaching out to Hispanic students, encouraging community-based postsecondary institutions, and introducing new policy priorities. An appendix presents additional data on educational attainment and educational opportunity. (Contains 74 references, 16 tables, and 32 figures.) (SM)

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Empowering Hispanic Youth and Adults

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Education = Success

Empowering Hispanic Youth and Adults

Anthony P. Carnevale

A PRODUCT OF THE ETS/HACU COLLABORATION

Educational Testing Service (ETS) is a private, nonprofit corporation devoted to measurement and research, primarily in the field of education.

The Hispanic Association of Colleges and Universities (HACU) is a national association of more than 200 colleges and universities that collectively enroll two-thirds of all Hispanic students in higher education in the United States. The mission of HACU is to promote the development of member colleges and universities; to improve access to and the quality of postsecondary educational opportunities for Hispanic students; and to meet the needs of business, industry, and government through the development and sharing of resources, information, and expertise.

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ETS Leadership Offices
Rosedale Road
Mail Stop 15-C
Princeton, NJ 08541
Phone: (609) 734-5531
Fax: (609) 734-1140

1800 K Street, NW, Suite 900
Washington, DC 20006
Phone: (202) 659-8056
Fax: (202) 887-0875
Web site: www.ets.org

HACU National Headquarters
8415 Datapoint Drive, Suite 400
San Antonio, Texas 78229
Phone: (210) 692-3805
Fax: (210) 692-0823
Web site: www.hacu.net

HACU Governmental Relations Office
One Dupont Circle, NW, Suite 605
Washington, DC 20036
Phone: (202) 833-8361
Fax: (202) 833-8367

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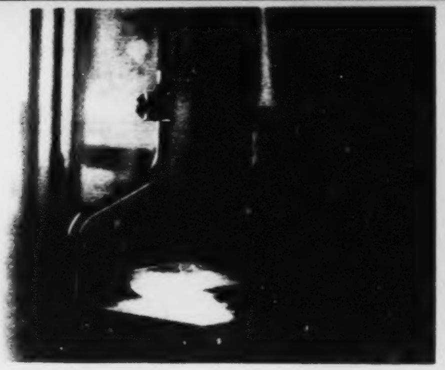

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Preface

Increasing the ranks of Hispanic college graduates has become a national priority in this knowledge-based economy, which increasingly relies on the skills of the country's fastest-growing minority group.

The success of our Hispanic higher education students, and their potential for innovation and leadership, ultimately will contribute to the economic success of all of us, making us a more competitive economic force in the next century. Within a few short years, Hispanics will become the nation's largest minority group and a significant part of the workforce. It is incumbent on all of us to become champions of Hispanic students and the schools and college campuses that serve them.

Educational Testing Service (ETS) and the Hispanic Association of Colleges and Universities (HACU) take great pride in the joint development and publication of *Education = Success: Empowering Hispanic Youth and Adults.* The fresh data presented in this report underscore the importance of expanding access to educational opportunity from preschool through graduate and professional school.

The member and associate member colleges and universities that constitute the Hispanic Association of Colleges and Universities are home to more than two-thirds of all Hispanic students in American higher education. HACU has been the premier national and international organization dedicated to Hispanic higher education success for almost 13 years. Representing more than 200 colleges and universities nationwide and numerous others across the Americas, HACU is the voice of Hispanic America in higher education.

The efforts of these colleges and universities to reverse historic shortages of Hispanic leaders in business, the professions, and emerging fields of advanced technology are at the core of the partnership between HACU and ETS. For three years, our two organizations have worked together to clarify the complex challenges of enhancing the educational and career opportunities of Hispanic students, spurred by the leadership of Eleanor Horne, ETS vice president for Collaborations, and corporate secretary, and Martin Ahumada, HACU Senior Consultant for Research and Policy Analysis.

Beyond clarifying the challenges, HACU and ETS have tackled—and will continue to tackle—the hard business of identifying solutions that will lead to full Hispanic participation in colleges, universities—and all sectors of this great nation's economy. It is in this spirit that we offer this report by ETS Vice

President for Public Leadership Anthony P. Carnevale, whose commitment to educational equity was demonstrated almost 30 years ago when he co-authored the principal affidavit in *Rodriguez v. San Antonio*, a landmark U.S. Supreme Court action to remedy unequal tax burdens and educational benefits. We hope *Education = Success* will serve as a guide to the path that policymakers, educators, communities, and parents must take, with one another, and with young people who will be the next generation of parents, employees, and civic leaders.

Educational Testing Service has assessed the abilities of students and adults in the service of learning and expanding opportunity for more than 50 years. As the world's largest private nonprofit educational measurement organization, ETS is committed to creating opportunities for adults and young people and to using assessment to serve the public good.

In pursuit of the missions of both HACU and ETS, we are pleased to add the publication of *Education = Success: Empowering Hispanic Youth and Adults* to our understanding of how this nation can close the education gap–and the opportunity gap–that America's Hispanic citizens and residents face.

Antonio Flores

Antonio Flores
President
Hispanic Association of
Colleges and Universities
San Antonio, Texas

Nancy S. Cole

Nancy S. Cole
President
Educational Testing Service
Princeton, New Jersey

HACU and ETS have tackled—and will continue to tackle—the hard business of identifying solutions that will lead to full Hispanic participation in colleges, universities—and all sectors of this nation's economy.

Executive Summary

The growing Hispanic presence in the United States is a continuing affirmation of American pluralism and a fresh source of national renewal. In 2010, the Hispanic-American population will become the country's largest minority group. As we approach this important crossroad, it is evident that the benefits of full inclusion for Hispanic Americans increasingly depend on their access to education, especially college education.

How are we doing?

There's good news and bad news.

Hispanic access to college is increasing. The share of male Hispanic[1] workers with some college under their belt doubled between 1974 and 1997—and the share of female Hispanic workers with some college almost tripled. Today, almost 18 percent of male Hispanic workers and 22 percent of female Hispanic workers have attended college.[2]

This trend will continue. The demography of higher education ensures that the number of Hispanics on college campuses will grow. "Generation X," or the "baby bust" that followed the "baby boom," is aging beyond the traditional age for undergraduates. "Generation Y," the children of the baby boomers, will create a new wave of undergraduates that will crest in 2015. Looking at the Hispanic population's projected demographic growth and current educational performance, we can expect as many as 500,000 additional Hispanic students aged 18 to 24 in college by 2015.

That's the good news. Here's the other side of the picture . . .

Hispanic youth still trail non-Hispanic White youth in educational achievement. On average, Hispanic students lag two years behind non-Hispanic White students through their elementary and secondary years, according to the National Assessment of Educational Progress (NAEP).

As a result, Hispanic students are significantly underrepresented on today's college campuses. The proportion of the Hispanic population in the 18- to 24-year-old age group—the age typical of college students—far exceeds the proportion of Hispanic 18- to 24-year-old students on campus. Unless college attendance among Hispanics increases at the same rate as the Hispanic share of the nation's 18- to 24-year-olds, the gap in Hispanic college attendance will actually grow—from the current level of 430,000 to as many as 550,000 Hispanic students still missing out on a college education in 2015.

[1] The term "Hispanic" masks the enormous diversity among Americans from Mexico, Spain, Central or South America, and the Spanish-speaking Caribbean nations. Although there are inherent and significant limitations in grouping the educational and economic characteristics of such a diverse population, analysis of the aggregate data still offers a useful starting point for public dialogue. Use of the term "Hispanic" dates back to official government statistics of the early 1970s. The term "Latino" has since emerged as a grassroots alternative to the governmentally imposed designation. We use "Hispanic" here for the sake of consistency with the official statistics used throughout this document.

[2] All references are to prime-age workers (30 to 59 years of age) unless otherwise noted.

Why is this important? A big reason is money. The more you learn, the more you earn. And nowadays, if you are going anywhere in the job market, you have to go to college first.

Underrepresentation on campus = underrepresentation in good jobs. Almost six out of ten jobs today require college-level skills. These are the jobs that are the fastest growing, and they replace many where high school diplomas used to be sufficient. In fact, since 1973 about 28 percent of the increase in jobs that require college-level skills come from growth in occupations that *always* required college—such as medicine, law, science, and education. A staggering 72 percent come from increased educational requirements in jobs that did not previously require college. Only 25 percent of managers and business professionals, such as insurance and real estate agents for example, had bachelor's degrees in 1959, compared to 50 percent in 1997.[3]

Thus, more Hispanic youth will need college to get their first jobs and more Hispanic adults will need college to keep their current jobs or get better ones.

Underrepresentation on campus also translates into lower earnings. Given the rapidly growing requirement for college degrees, and the college education gap that already exists between Hispanic workers and non-Hispanic White workers, the corresponding earnings gap should come as no surprise. On average, non-Hispanic White men earn $17,000 more a year than Hispanic men and non-Hispanic White women earn $6,700 a year more than Hispanic women.

This earnings gap has actually grown by almost 30 percent since 1973. While other factors contribute to this gap—for example, the fact that Hispanics are younger and not as far along in their careers and the fact that language barriers can mask true abilities and inhibit economic opportunity—the *principal* cause of the Hispanic wage shortfall is the Hispanic gap in education and skill. This gap is evident in every occupational category. While there are Hispanics who lead the field in every occupation, Hispanics are less well-educated and skilled, on average, than other members of each occupational group. For instance, 30 percent of Hispanic managers and professionals are among the most educated—and most highly paid—in their occupations, compared to almost 60 percent of non-Hispanic White managers and professionals. The ratio of non-Hispanic Whites to Hispanics among the most skilled technical, sales, and administrative support workers is three to one; among crafts workers, it is four to one.

The difference in earning capacity is one obvious reason to strive for increased educational attainment in the Hispanic community.

Nowadays, if you are going anywhere in the job market, you have to go to college first. Almost six out of ten jobs today require college-level skills.

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[3] Throughout this document, the term "bachelor's degree" means any four-year college degree.

> **By 2015, we could close the education gap between Hispanic and non-Hispanic White youth if we increased college participation among Hispanic youth by 10 percentage points.**

But education is not just about dollars and cents. Hispanic college graduates serve as role models for other Hispanics, and others—succeeding in professions ranging from medicine to law to education, becoming political and economic leaders, helping to shape policy from the schoolhouse to the White House. These leaders serve as an inspiration to subsequent generations—and we need more of them.

The goal of greater educational and economic opportunity for Hispanics is within our reach. According to the 1992 National Adult Literacy Survey (NALS), while only 11 percent of the Hispanic population have college degrees, 27 percent have college-level skills and are *ready* for college-level work. Another 27 percent of Hispanic adults would be ready for postsecondary education with as little as 200 hours of coursework—about a semester of preparation—to improve their foundation skills.

By 2015, we could close the gap in college attendance between Hispanic and non-Hispanic White youth if we increased participation among Hispanic 18- to 24-year-olds in college by 10 percentage points.

Suppose we achieved that goal. Suppose that the same proportions of 18- to 24-year-old non-Hispanic White students and Hispanic students attended and graduated from college. What would that mean?

- There would be an additional 430,000 Hispanic 18- to 24-year-olds on college campuses and another 110,000 Hispanic college graduates.
- This increased Hispanic student presence would benefit *all* students. Research shows that both minority and majority students on diverse campuses learn problem solving, leadership, and other critical work skills better than students on campuses with more homogeneous student bodies.
- Similar benefits would accrue as students enter the workforce. There is increasing evidence that diverse work teams help institutions interact successfully with a more varied market at home and abroad, discourage "groupthink," and encourage learning, creativity, and flexibility on the job. In today's economy, these competencies are important competitive assets.
- Greater educational attainment in the Hispanic community also would have direct economic benefits, adding another $130 billion annually in new wealth to American society.
- This new wealth would add $45.5 billion annually to public revenues, helping all Americans.

- The proportion of Hispanic families with less than adequate incomes would be reduced from 41 to 21 percent, decreasing the demand on public support programs.

Clearly, closing the education—and opportunity—gap will have wide-reaching benefits not just for the Hispanic population but for the American population as a whole. So, let's look at how we reach that goal.

Where the Jobs Are

The first step toward closing the opportunity gap is to analyze current Hispanic employment patterns in relation to educational requirements on the job. One way to do that is to divide the job market into five functional areas based on what people actually *do* at work and what educational level is required.

Low-Skilled Services Jobs. These jobs—for example, retail counter workers, food service workers, cab drivers, and cleaners—are mostly low-wage positions. As the economy grows, these jobs are increasing in absolute numbers but not in relation to other jobs. They have represented a steady 20 percent of all jobs since 1959.

Almost 40 percent of low-skilled services workers have attended college, but most have not yet attained degrees. About half of these workers are under the age of 25 and will move on to better jobs when they complete their education. A substantial share, however—especially those over the age of 25—will remain stuck in low-wage jobs because of low educational attainment.

Almost a quarter of all Hispanic workers now have one of these low-skilled services jobs, compared to a seventh of non-Hispanic White workers. And the concentration of Hispanics in these jobs is growing, not shrinking. Between 1973 and 1997, the share of Hispanic men in low-skilled services jobs rose from 15 to 23 percent. The share of Hispanic women in these jobs rose substantially less, from 23 to 25 percent.

Factory Jobs. Unlike services jobs, which are growing in absolute numbers but not as a proportion of all jobs, factory jobs are *decreasing*—both proportionally *and* absolutely. Between 1973 and 1997, the share of factory jobs fell from 29 to 19 percent of all jobs. That translates to 12 million fewer factory jobs in 1997 than would have existed had their 1973 share of employment continued.

Closing the education—and opportunity—gap will have wide-reaching benefits not just for the Hispanic population but for the American population as a whole.

The factory jobs that remain are increasingly being filled by workers with skills beyond high school, as new technology and more efficient work processes combine to enable manufacturers to produce more product, using fewer but more highly skilled workers. In 1959, only 8 percent of all workers on the factory floor had any college. By 1997, that proportion had increased to more than 34 percent.

The first step toward closing the opportunity gap is to analyze current Hispanic employment patterns in relation to educational requirements on the job.

Hispanics have been hardest hit by the decline in factory jobs and by the increasing skill requirements in the jobs that remain. In 1973, the share of Hispanic workers in industrial employment was 43 percent. By 1997, that percentage had fallen to 28 percent.

High-Tech Jobs. The loss in factory jobs is not being balanced by openings in high-tech jobs. More Americans are using technology on the job, but relatively few Americans are needed to make, maintain, or repair that technology. Between 1959 and 1997, high-tech jobs rose from 3.4 to 6.6 percent of all jobs–about 10 million out of 133 million total. But changing demands within the technical workforce–for instance, the shift from jobs for pipe fitters, millwrights, and welders to computer technicians–have created numerous openings and worker shortages.

More than 80 percent of high-tech jobs require at least some college. Only 3.5 percent of Hispanic workers–compared to 7.7 percent of non-Hispanic Whites–held high-tech jobs in 1997. And in high-tech jobs that required college or graduate degrees, non-Hispanic Whites outnumbered Hispanics by more than three to one.

Education and Health-Care Jobs. Because of the aging of the baby boom and the new economy's increased educational demands, more Americans are now working in education and health-care jobs.

Seventy-four percent of education and health-care workers have at least some college–a percentage that is almost as high as that of high-tech jobs. Only 10.4 percent of the Hispanic population are employed in education or health care, compared with 14.5 percent of the general population. Only a third of all Hispanics who work in these areas have college-educated managerial or professional jobs.

Office Jobs. The largest, fastest-growing, and best-paid group of employees are office workers. These managers, accountants, editors, sales people, marketers, and other office workers number 51 million–38 percent of all workers. These jobs pay one and a half times as much as other jobs and will grow by 4 million by 2006. Sixty-six percent of office workers have at least some college and 30 percent have four-year college degrees.

Hispanic workers are not getting their share of office jobs—especially their share of the better office jobs. Only a quarter of all Hispanic men and a third of all Hispanic women are employed in office jobs, compared to half of all non-Hispanic Whites. Only 6 percent of Hispanic workers have the highest-paying office jobs that require at least some college.

What the Jobs Pay

Another way to look at jobs is by their pay levels. The highest-paying jobs are the elite managerial and professional jobs that average annual earnings of $59,000 for men and $34,000 for women. Eighty-six percent of the people who hold these jobs have at least some college. Only 16 percent of Hispanic workers hold these jobs, compared to 38 percent of non-Hispanic Whites.

The jobs in the middle of the pay hierarchy are good jobs that go to crafts workers, technicians, clericals, and others. These jobs average $37,000 for men and $22,000 for women. A little more than half of the workers in these jobs have at least some college. Middle-pay jobs show more equal representation than elite jobs, employing 32 percent of Hispanics and 39 percent of non-Hispanic Whites.

Retail, personal services, and other low-skilled occupations are the lowest-paying jobs, averaging $25,000 for men and $13,000 for women. Fifty-two percent of Hispanics hold these jobs, compared to 24 percent of non-Hispanic Whites.

With all the jobs that require college-level skills today, it's no surprise that the economic outlook for Hispanic workers mirrors their educational level.

The Economic Outlook for Hispanic Adults

The economic outlook for Hispanic workers, thus, varies with their skill levels. According to NALS, 7 percent of Hispanic adults have **advanced or superior skills** similar to the skills of college graduates. By 2006, almost a third of all new jobs will be created at this skill level. Workers with advanced or superior skills also have the highest earnings—on average, $29,100 for Hispanic women and $42,600 for Hispanic men.

About one in every five Hispanic adults has **competent skills** similar to the most highly qualified high school graduates or people with some college but no degree. Hispanic women at this skill level earn $23,700, on average, and Hispanic men earn $37,900. By 2006, jobs for people with competent skills will grow by 14 percent, adding 37 percent of all new jobs.

With as little as 200 hours (about one full semester) of education or training, Hispanics at the competent skill level could move up to the advanced skill level, improving their chances of obtaining jobs that pay as much as $10,000 more a year. Hispanic workers with advanced or superior skills earn, on average, about $6,600 more a year than Hispanic workers with competent skills.

Workers with advanced/superior or competent skills have greater access to training on the job and computer-based technology at work. Up to 40 percent get formal training and 15 to 30 percent get informal training from their employers. Workers who receive employer-based training earn 10 to 15 percent more than similar but untrained workers (Levine, 1996), and workers with access to computer-based technology earn 15 to 25 percent more (Krueger, 1993).

Hispanics with advanced or superior skills average about $6,600 more a year than those with competent skills...who earn about $8,500 more than those with basic skills... who earn about $6,500 more a year than those with minimal skills.

The prospects for the 27 percent of Hispanic adults with **basic skills**, similar to people graduating from high school in the lower half of their class, are not so optimistic. Jobs that require basic skills will comprise 22 percent of all new jobs. Earnings for Hispanic workers with basic skills are, on average, $18,900 for women and $26,700 for men.

The least skilled among these workers would require up to 200 hours of education (roughly a full courseload for one semester) to bring their skills to the competent level similar to an above-average high school graduate, thereby qualifying them for jobs that pay $5,000 to $10,000 more in annual earnings. Another 200 hours of education or training would prepare them for college-level work or jobs that require some college. Hispanic workers with competent skills earn about $8,500 more a year than those with basic skills.

Almost half of all Hispanic adults have **minimal skills**, similar to school dropouts. Hispanic women with these skills earn $13,800, on average, and Hispanic men earn $18,200. While jobs at this skill level will grow by 11 percent by 2006, they will contribute only 10 percent of all new jobs created.

The least skilled of these workers could require as much as 900 hours of education or training (more than two full years) to bring their skills to the basic level of a below-average high school graduate, and to increase their opportunities for jobs that pay roughly $5,000 to $10,000 more a year. Hispanic workers with basic skills typically earn about $6,500 more a year than those with minimal skills.

Policy Priorities

Clearly, the economic future of Hispanic Americans depends on their educational attainment. And while closing the gap in college attendance between

Hispanics and non-Hispanic Whites is a matter of just 10 percentage points, the issue is not quite that simple. Many 18- to 24-year-old Hispanic students who are ready and eager to attend college cannot go because shortsighted public policies have failed them. Available data suggest that 53 percent of Hispanic high school graduates are qualified to enroll in four-year programs, but only 31 percent actually go to college. Forty-four percent of non-Hispanic White high school graduates who enroll in four-year programs complete their degree, compared to 20 percent of Hispanics.

Moreover, Hispanic 18- to 24-year-olds are just one part of the picture. We must focus equally on the more complex needs of older students. Already *more than half* of the Hispanics in college, including part-time students, are over the age of twenty-five and require educational services that integrate schooling with work and family responsibilities. As education requirements increase on the job, an even larger share of Hispanic adults will need skill upgrading to keep their jobs or get better ones.

How can we better serve the postsecondary educational needs of all Hispanic students?

How can we better serve the educational needs of all Hispanic students? The usual answers focus on money, affirmative action, testing, and bilingual education. These answers are important parts of the solution—but they are incomplete.

The usual answers tend to focus on money, affirmative action, testing, and bilingual education. These answers are important parts of the solution—but they are incomplete.

Financial aid is essential for low-income families and has not kept pace with increasing college costs. Moreover, loans make up a growing share of financial aid—and low-income families may be more reluctant than others to incur additional debts.

We need to worry both about family budgets and the budgets of state governments. Students today pay less than 20 percent of the annual cost of public higher education. Governments, especially state governments, contribute the difference. The college-age arrival of Generation Y between now and 2015 will increase both the demand for higher education and the resulting budgetary pressures.

We will need to be vigilant to ensure that the next wave of Hispanic students are not held hostage in the fiscal struggles between higher education authorities and political leaders. Cost efficiency is always desirable but our real bottom line in evaluating financing proposals must be their effects on student access and the quality of instruction.

Our attention to financial issues, however, should not preclude attention to other critical matters. Access and persistence in college are not about money alone.

A large proportion of the young Hispanic students entering college are either first-generation Americans or first-generation college students. They need **more social support, counseling, and college and career planning** than are currently available. And the *majority* of Hispanic college students do not even begin to fit the traditional college-student profile, which assumes an 18- to 24-year-old freshman from a middle-class, majority family. Many Hispanics are older, are parents, or are working. These nontraditional students do need more financial help—and a first step would be to restructure the current federal student aid system so that it is more user-friendly for adults. But adult students also need **more supportive services and flexible course offerings that allow them to integrate schooling, work, and family.**

Our attention to financial issues should not preclude attention to other critical matters. Access and persistence in college are not about money alone.

Affirmative action remains important for increasing educational opportunity in our most selective and prestigious colleges. Affirmative action at these schools creates a still greater good by providing role models of Hispanics who meet the highest standards of academic and career success.

Traditionally, however, our affirmative action efforts have focused almost entirely on the narrow juncture in the educational pipeline between high school and admission to the nation's 120 most selective undergraduate schools.

For the vast majority of Hispanic students, this is far too little, and far too late. The nation's most selective schools represent only 4 percent of all two-year and four-year postsecondary institutions and admit only 6 percent of Hispanic students who go to college each year. The college admissions period is just a small segment of the 192-month K-16 pipeline—thirteen years (156 months) of educational inequality may have already taken their toll. And the issue of admissions is just one of the potential barriers to college entry and persistence through graduation.

If we are to truly increase access to college and retention through graduation, we need to expand the focus of our affirmative action policies substantially.

We need to look not just at college entry but at the entire K-16 pipeline. In other words, we need **affirmative development and affirmative outreach** for all Hispanic students through the full 192 months in the K-16 system, not just affirmative admission focused on relatively few students in the spring of their senior year of high school. Unless our policies work to improve academic preparation from kindergarten on, the least-advantaged Hispanic students will not be ready for college and others will face a difficult struggle making it through to college graduation.

We must look beyond the most selective colleges and universities and encourage students to do so as well. For the vast majority of Hispanic students, the issue is not whether they go to the most selective colleges, but whether they enroll in and obtain a degree from *any* postsecondary institution. There are many roads to success in American higher education. The most selective 120 schools graduate about 100,000 students, including about 6,000 Hispanic students, each year. The economy, however, creates as many as *2 million* job openings every year that require college-level skill.

Tests alone should never determine college admissions. In fact, they play a relatively less important role in admissions outside the most selective tier of colleges.

However, tests do offer Hispanic students a way of getting noticed in the crowd of college applicants and of earning assistance. For instance, students with SAT scores above 1000 have a 60 percent chance of graduating from a four-year school. More than half of the Hispanic students who score above 1000 on the SAT come from families with earnings below the national average.

We need to apply our tests in ways that make society accountable for closing the Hispanic education gap and that educate the educators.

We must find ways to enhance the **ability of tests to open doors**, not close them. We need to continue to improve our tests. We need tests that support effective bilingual education by articulating and unmasking the difference between academic achievement and English language ability. We need tests that are diagnostic and authentic, that address real-world performance standards, and that validate and support diversity.

We need to apply our tests in ways that make society accountable for closing the Hispanic education gap and that educate the educators. The idea is not to use test results to reward and punish individual teachers—and certainly not to imply that a single teacher should be required to overcome years of educational neglect in a single year—but to use test results to learn how to get from where we are to where we want to go. Ultimately, to make educational progress, we need tests to establish the linkages between test results and specific classroom activities, as well as types of teacher preparation and in-service training.

Bilingual education and language immersion programs are important means to improve Hispanic academic performance and career prospects. In that regard, we should recognize that there is probably no one best way to structure these

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programs. Instead, alternative approaches must be matched to the needs of the diverse Hispanic population and customized to the developmental needs of individual students.

In the emerging global economy and culture, every well-educated person should be literate in more than one language. English should probably be one of them. And in the Americas, the other one should probably be Spanish.

But bilingual education is more than just a means to an end. It is also **an important goal in its own right**. Experts may argue over alternative approaches, but no one suggests that knowledge of more than one language does anything but enhance college and career success. In the emerging global economy and culture, every well-educated person should be literate in more than one language. English should probably be one of them. And in the Americas, the other one should probably be Spanish.

Investing in Hispanic Social Capital

Once we get past the challenging but manageable policy issues of money, affirmative action, testing, and bilingual education, we confront a set of barriers to college that are even more difficult to overcome because they can't be set aside with a few strokes of a governor's or president's pen. If we can make progress on these more difficult fronts, however, the effects will be powerful and lasting.

Chief among these obstacles are the invisible social barriers that keep Hispanic students, especially low-income students, from feeling valued, confident, and welcomed on the nation's college campuses. To overcome these barriers, we will need a strategy of engagement, encouragement, and social support. Financial investments will be necessary, but even more essential is human investment–showing interest, defining and imparting values, and advising and caring.

These types of investments–social capital investments–pay off in self-esteem and high academic expectations. Simply put, young people tend to become who they expect to become. Students with high expectations perform well in school; students with low expectations don't. Positive expectations are formed by involving parents, teachers, peers, and communities in the education of individual students. Students whose parents, teachers, and communities are involved in their education value schooling, expect to go to college, and are much more likely to go to college and graduate.

Today, the expectations of Hispanic youth are low, relative to other groups. Only 55 percent of Hispanic eighth-graders expect to get college degrees, compared with 72 percent of Asians, 68 percent of non-Hispanic Whites, and 64 percent of African Americans.

Foremost, we need to marshal our social capital to build the human capital of Hispanic students and to ensure their full participation in the culture, economy, and body politic. We need to engage the energies of Hispanic families, communities, and social institutions such as churches and schools if we are to succeed in raising Hispanic students' expectations and lowering the motivational barriers to college enrollment and persistence through graduation.

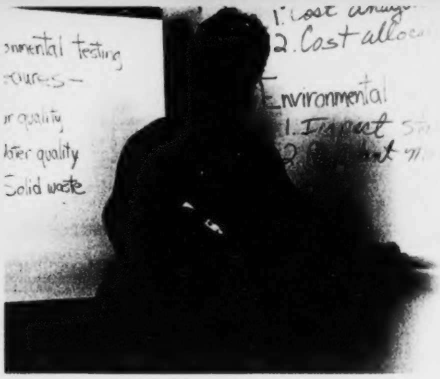
In doing so, we need to give particular attention to nontraditional students who make up a sizeable portion of the Hispanic student population. Usually older and often immigrants, these nontraditional students have the least social capital of all. They are often isolated individuals, single parents, or members of struggling families, and they tend to be working in jobs with little long-term attachment. They have aged beyond the school and community support structure reserved for children and adolescents in American culture, and they are often unattached to other social and economic institutions that might provide direction and financial and psychological support. Reaching them will be our greatest challenge.

Ultimately, in all of this, we need to develop strategies that respect the diversity of the Hispanic community and reject the view that "assimilation" requires Hispanics (or any other group, for that matter) to adopt the mores, beliefs, and behaviors of a mythical American "mainstream" in order to succeed. The notion of a single American culture is inconsistent with American history and ignores the realities of the development of individual and group identities in the modern world.

An insistence on one-way assimilation not only disempowers minority students, their families, and their social institutions, it also disempowers our society as a whole.

People have been simultaneously socialized in multiple cultural contexts since the onset of industrialization and urbanization in the 18th century, when isolated cultures were first thrown together by the relentless forces of technological change, urbanization, and industrialization. As our nation and the world grow even more complex and diverse, individuals will increasingly need to negotiate multiple cultural landscapes. One role of educators must be to help each of us do so. An insistence on one-way assimilation not only disempowers minority students, their families, and their social institutions, it also disempowers our society as a whole.

If we focus on these deeper causes of frustrated potential, our policies will be more surefooted. The wave of new Hispanic students is beginning to crest; we need to swim with it, not against it.



Introduction

The foundation for the ongoing collaboration between the Hispanic Association of Colleges and Universities (HACU) and Educational Testing Service (ETS) rests on three supporting pillars: the first, an inescapable fact; the second, a common commitment; and the third, an ultimate reality.

The inescapable fact that unites HACU and ETS is that we both recognize that anyone who is going anywhere in the new global economy will have to go to college first.

The common commitment that unites HACU and ETS is that we are both dedicated to improving access to postsecondary education for Hispanic youth and adults.

And the ultimate reality that brings us together is that we agree that we will know we have achieved our goal of full Hispanic inclusion when, and only when, Hispanic college graduates turn their educational accomplishments into good jobs and can take advantage of promising career and leadership opportunities in business, government, education, health care, law, and the arts.

What would happen if we actually achieved our goal?

Improvements to education for Hispanics would improve the economic situation for the entire nation. In purely material terms, more Hispanic participation in postsecondary education would help the bottom line not only for individual Hispanic families but for the nation as a whole. Suppose, for instance, that the same proportion of non-Hispanic White and Hispanic 18- to 24-year-olds went to colleges and universities and eventually graduated. If we could achieve that goal, there would be another 430,000 Hispanic 18- to 24-year-olds on college campuses and another 110,000 Hispanic college graduates.

This increase in the number of Hispanics attending and graduating from college would reduce the proportion of Hispanic families with less than adequate incomes from 41 to 21 percent.[4] It would also do a lot of good for the nation as a whole, adding $130 billion annually in new wealth to American society. And that new taxable wealth would translate annually into another $45.5 billion in revenues to our federal, state, and local coffers.[5]

Improvements to education for Hispanics would improve education in general and add value to our workforce. The available evidence tells us that there would be direct educational and career benefits for all students if there were more Hispanics on college campuses. Diverse college classes discourage "groupthink" and en-

[4] What does it take for a family to live minimally well but adequately? In the 1970s, the Labor Department estimated that a family could maintain a "minimum but adequate" life style if their income was about 75 percent more than the poverty line, which differs for families of different sizes. The government's mechanism for defining living standards for households of different sizes is based on the principle that there are economies of scale when people share expenses. Using this approach, in 1997, for instance, $28,000 represented a "minimum but adequate" income level for a family of four.

Under that definition, 41 percent of Hispanics and 14 percent of non-Hispanic Whites live in families below the "minimum but adequate" level. If Hispanics had the same educational attainment and commensurate pay as non-Hispanic Whites, the earnings of Hispanic men would increase by 71 percent and Hispanic women by 34 percent, and household income of only 21 percent of Hispanics would fall below the "minimum but adequate" level.

(continued on next page)

courage more open-ended learning. Diverse college classes also teach students leadership, problem solving, and other skills that are becoming ever more critical in the new economy (Hurtado, 1990; Chang, 1996).

In the same way, diverse work groups in our workforce provide more value added than homogeneous work groups (Carnevale and Stone, 1995). But we cannot have more diverse work groups unless we have more diverse college campuses first. Almost six out of ten jobs already require at least some college, and that proportion will continue to increase.

Access to education, of course, is much more important than dollars and cents. Neither HACU nor ETS believes that the sole purpose of increasing Hispanic educational opportunities is merely to increase our national wealth, to enrich public treasuries, or to train foot soldiers for big business. There are other, equally important rewards.

Improvements to education for Hispanics would bring critical societal benefits. The goal of our education system is to prepare good neighbors and good citizens as well as good workers. It is a primary responsibility of educators to help Americans–especially new Americans–find their way, to promote upward mobility, to discourage the constant reproduction of economic, political, and cultural elites, and to reinvigorate our society and its institutions with fresh and diverse talents and perspectives.

These educational goals and responsibilities cannot be met if all portions of the society are not full participants in the education system. Nor can they be met if the focus is on removing rather than respecting differences.

Assimilation is not the goal. A working pluralism is.

Education is a critical institution in the service of pluralism. It is particularly important to stress this point, given that past dialogue on Hispanic educational opportunity and career choices has split along one of the deepest and oldest fault lines in American politics–the fault line between assimilation and cultural diversity.

For too many, the condescending even if often well-meaning goal of assimilation is to encourage "them" to become more like "us"–"us" being middle-class Whites and "them" being everyone else. The implicit idea is that minorities should willingly abandon their culture in order to be embraced by the majority.

Equality in the proportion of Hispanics and non-Hispanic Whites attending and graduating from college would reduce the proportion of Hispanic families with less than adequate incomes from 41 to 21 percent—and it would add $130 billion annually in new wealth to American society.

It is noteworthy that even after equalizing educational attainment and commensurate earnings between Hispanics and non-Hispanic Whites, the proportion of Hispanic families with incomes below the "minimum but adequate" level is still 7 percentage points above the level for non-Hispanic White families. Although other factors play a role, the principal cause of this difference is the fact that, compared to non-Hispanic Whites, Hispanics have larger families, younger age and earnings profiles, and more single female-parent households.

[5] In 1997, the 13.6 million Hispanic workers earned $264 billion. If their education and commensurate earnings per worker equaled that of non-Hispanic White workers, then total Hispanic earnings would have been $338 billion, or $130 billion more annually. If we assume a total federal, state, and local tax rate of 35 percent, then these added earnings would lead to $45.5 billion annually in new public revenues.

The idea of striving for a single homogeneous culture undermines basic American values that support diversity and pluralism. What's more, it flies in the face of modern reality in general—and of the American experience in particular.

Overlooking, for the moment, the implications of any assumption that one culture is preferable to another, this one-size-fits-all approach to policy—especially education policy—undermines teaching and learning because it ignores the needs of individuals. The idea of striving for a single homogeneous culture also undermines basic American values that support diversity and pluralism. What's more, it flies in the face of modern reality in general—and of the American experience in particular.

Modern society demands that each of us develop a complex repertoire of cultural affiliations in our personal, spiritual, and working lives. We are each members of many cultures. Americans are socialized in multiple contexts, each context influencing the others in complex ways.

The average American today connects to institutions, colleagues, friends, and relatives in many different ways. We typically have a work identity and a circle of colleagues, a private identity and a circle of leisure friends, and an avocational identity and a circle of hobby friends, from bird watching to dancing. We have a family circle (further subdivided into close and distant relatives), a neighborhood circle, and a circle of friends. Many people in those circles overlap; many more do not.

Most of us also have an ethnic identity. We consider ourselves to have Irish or Italian or Latino or Chinese or Native American or African American identities even within all these other circles—including the larger circle of being an "American."

The critical developmental issue for each of us, and for schools, is not to choose among our identities but to find a way to integrate this diversity of ongoing experiences.

Success = Empowerment

Both HACU and ETS understand "success" as multi-dimensional, not as a one-dimensional outcome associated with joining the dominant culture, accumulating property, or having status or worthiness based on material wealth.

At its most basic level, *Education = Success* because it "empowers," where "power" is used as it is meant in its Latin origins—"to be able to." Education allows people "to be able to" do many things: to experience the intrinsic joy of understanding, to arrive at independent political judgments, to cope with change and complexity, and to build on the past and envision the future.

But the inescapable reality is that ours is a society based on work *and* knowledge. And education is not just a matter of individual empowerment, but of shaping a society that works—in all senses of the word.

If educators cannot fulfill their *economic* mission to help our youth and adults become successful workers, they also will fail in their *cultural* and *political* missions to create good neighbors and good citizens.

In our work-based society, failure to give people the knowledge and the skills they need to get and keep good jobs can have disastrous personal consequences. Those with the least education are much more likely to experience violence, addiction, poverty, illness, incarceration, and other forms of abuse. In addition, we know that those who can't get and keep jobs eventually drop out of the political system and withdraw from community life. In some cases, they may create alternative economies, cultures, or political structures that are a threat to the mainstream.

Simply put, more education empowers individuals with more choices in their lives—and that benefits the entire society.

The best summary evidence of our failure to close the opportunity gap is the continuing difference in the earnings of Hispanics and non-Hispanic Whites.

A Hard Look at Where We Are Now

Choices for Hispanic Americans have grown with educational progress. But the gap between the American promise of equal educational opportunity and the reality on the ground for Hispanic Americans continues in spite of substantial progress.

The best summary evidence of our failure to close the opportunity gap is the continuing difference in the earnings of all Hispanics and non-Hispanic Whites. On average, non-Hispanic White men earn nearly $17,000 more a year than Hispanic men and, on average, non-Hispanic White women earn $6,700 a year more than Hispanic women.

More and more, good jobs require college-level skills and degrees—making access to college increasingly essential to closing the earnings gap between non-Hispanic Whites and all Hispanics. And the economy will continue to create jobs requiring college-level skills much faster than it will create jobs requiring high school diplomas or less. The room at the top rung of the job market for college-educated workers is likely to grow, as will the crowding at the bottom rung for those without college.

There have been marginal improvements in job prospects for Hispanics, especially Hispanic women. But as a result of their limited access to higher education, Hispanics still don't get their share of the best jobs in offices, schools, or health-care institutions. Good factory jobs for Hispanics are disappearing, and Hispanics are increasingly concentrated in the low-wage services sector.

So what is to be done? What should HACU, ETS, and others do?

We can start by looking more closely at where we are now.

Education and Hispanic Economic Opportunity

In recent years, the role of education in the economy has changed dramatically, and the relationship between education and Hispanic economic opportunity has changed with it. Many more jobs today require postsecondary training than ever before. Since 1959, the overall proportion of workers with at least some college training increased from fewer than 20 percent to more than 50 percent.

Two kinds of labor market shifts underlie this dramatic change:

- The fastest-growing occupations are those that tend to require at least some college.
- Jobs that previously required only high school diplomas (or less) are increasing their postsecondary skill requirements.

The second shift is the critical one. About 28 percent—a significant but relatively small share—of the increased educational requirements come from growth in fields that have *always* required postsecondary education. A whopping 72 percent come from increased educational demands now being made by employers who previously did not require any college.

Along with the rest of the population, educational attainment among Hispanic workers has increased substantially since 1973.

The increasing premium being placed on education has encouraged more schooling, especially among women *(see Table 1; see also Table A in Appendix)*. Between 1973 and 1997, the proportion of the prime-age workforce that had not finished high school declined from 34 to 11 percent. The proportion of all workers with some college but no degree jumped from 12 percent to more than 26 percent.[6] The proportion of the workforce that had either attended *or* graduated from two-year or four-year colleges increased from fewer than a third to more than half of all workers. These college-educated workers are today divided almost evenly between those with some college but no four-year degree and those who have completed a four-year college or graduate work.

Along with the rest of the population, educational attainment among Hispanic workers has increased substantially since 1973. High school dropout rates have declined by a third. The rates of increased college attendance among Hispanic workers compare to, and sometimes exceed, the rates for the

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[6] In official government statistics, prior to 1992, "some college" includes people with associate's degrees as well as people who have attended college but have not received a degree.

TABLE 1

Educational Attainment of the Workforce, 1973 and 1997

Percent of the prime-age workforce

	Men			Women		
Educational Attainment	**1973**	**1997**	**% Change**	**1973**	**1997**	**% Change**
High school dropouts	33.3%	12.2%	-63.5%	30.2%	9.0%	-70.2%
High school graduates (only)	35.9	32.1	-10.6	46.2	34.2	-26.0
Some college	12.5	25.6	+104.8	11.5	28.7	+150.5
Bachelor's degree	9.6	19.2	+100.0	7.3	19.0	+159.3
Graduate degree	8.7	11.0	+26.4	4.8	9.0	+87.7
Total	**100.0**	**100.0**		**100.0**	**100.0**	

ETS analysis of Current Population Survey (March 1974; March 1998).

TABLE 2

Educational Attainment in the Hispanic Workforce, 1973 and 1997

Percent of the Hispanic prime-age workforce

	Men			Women		
Educational Attainment	**1973**	**1997**	**% Change**	**1973**	**1997**	**% Change**
High school dropouts	62.0%	42.3%	-31.8%	54.7%	34.2%	-37.5%
High school graduates (only)	22.2	27.6	+24.5	31.6	28.6	-9.7
Some college	9.2	17.7	+92.9	7.5	22.2	+196.0
Bachelor's degree (only)	3.7	7.7	+105.8	3.8	11.5	+203.1
Graduate degree	2.9	4.7	+59.7	2.3	3.5	+48.8
Total	**100.0**	**100.0**		**100.0**	**100.0**	

ETS analysis of Current Population Survey (March 1974; March 1998).

workforce on the whole. This increase is most striking among Hispanic females—in part, because men who have access to better-paying jobs at every level of education are more likely to take jobs rather than continue their education *(see Table 2; see also Table A in Appendix).*

But the picture is not as pretty as it first appears. While Hispanic participation in postsecondary education has increased significantly, overall participation has increased as well. The bottom line is that Hispanics still have lower participation rates than the workforce on the whole, and the proportion of Hispanics with college degrees or graduate training in 1997 still has not reached the levels achieved by the general population in 1973.

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Education and Earnings: The Relative Value of Associate's Degrees, Some College, and Bachelor's Degrees

At the same time that the share of jobs requiring at least some college skyrocketed, the relationship between postsecondary attainment and earnings became more complex. Because of low productivity growth, the size of the economic pie has grown relatively little since 1973, compared to the postwar years between 1946 and 1973. And that fact, combined with the increasing premium we've placed on skill, has created a competitive pressure cooker based on educational attainment. Those with postsecondary education are now getting bigger slices of the pie.

On average, the value of a bachelor's degree is greater than the value of either an associate's degree or some college with no degree. But, at every earnings level, there is substantial overlap between the earnings of those with associate's degrees or some college and those with bachelor's degrees but no graduate work *(see Figure 1)*. Eighty-one percent of people with associate's degrees or some college earn the same as those with bachelor's degrees.

The size of the economic pie has grown relatively little since 1973. And that fact, combined with the increasing premium we've placed on skill, has created a competitive pressure cooker based on educational attainment. Those with postsecondary education are now getting bigger slices of the pie.

Although the average (mean) earnings of workers with bachelor's degrees are higher than those of workers with associate's degrees or some college, almost a third of all workers with associate's degrees or some college earn more than the median bachelor's degree earnings. Those individuals tend to be concentrated in elite managerial and professional jobs or in technical or skilled occupations.

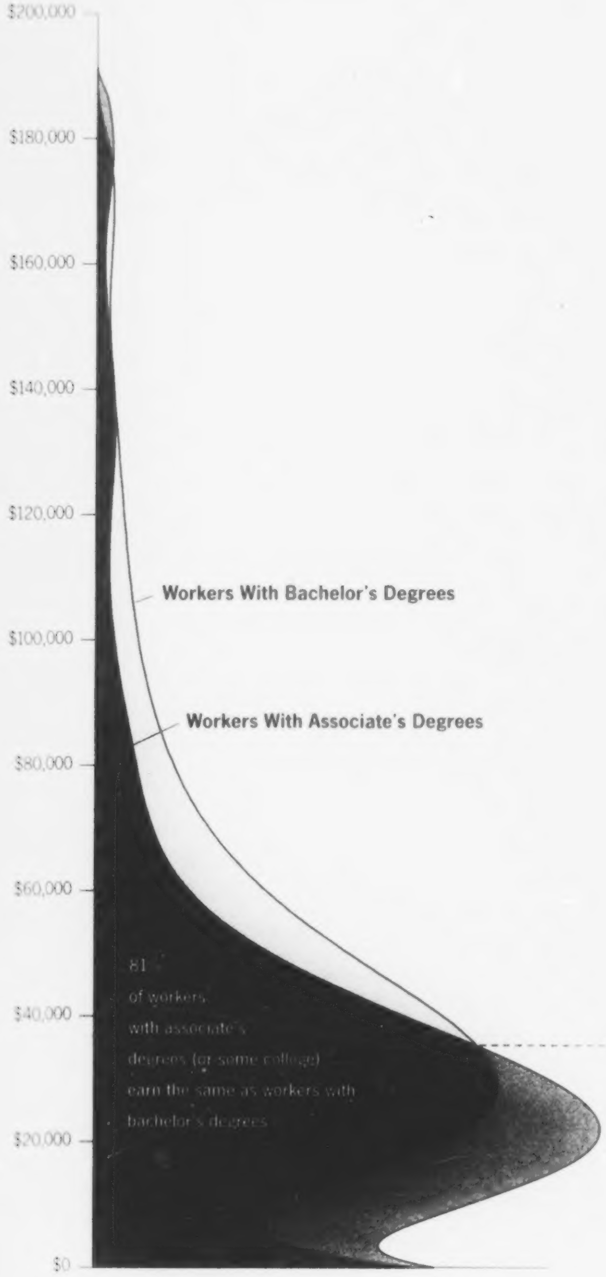
As education's role in determining jobs and earnings has grown, Hispanics have lost ground by not increasing college attendance at the same rate as other groups. This is particularly true among male Hispanic workers, whose earnings fell from $28,800 in 1973 to $26,900 in 1997. By contrast, African-American men, during this period, translated increased education into earnings gains, from $26,200 to $29,000. For non-Hispanic White men, the gain was more limited, from $42,500 to $43,900.

Among women, increased participation in the labor force raised the earnings across the board. For non-Hispanic White and African-American women, the gain was almost exactly 50 percent over this 24-year period. Hispanic women, with smaller education gains, experienced an earnings increase of 30 percent. So, once again their relative position declined.

FIGURE 1

81% of Workers With Associate's Degrees (or Some College) Earn the Same as Workers With Bachelor's Degrees

Share of workers, by education and 1997 earnings



68% of workers with bachelor's degrees earn more than $36,000, compared with 49% of workers with associate's degrees (or some college)

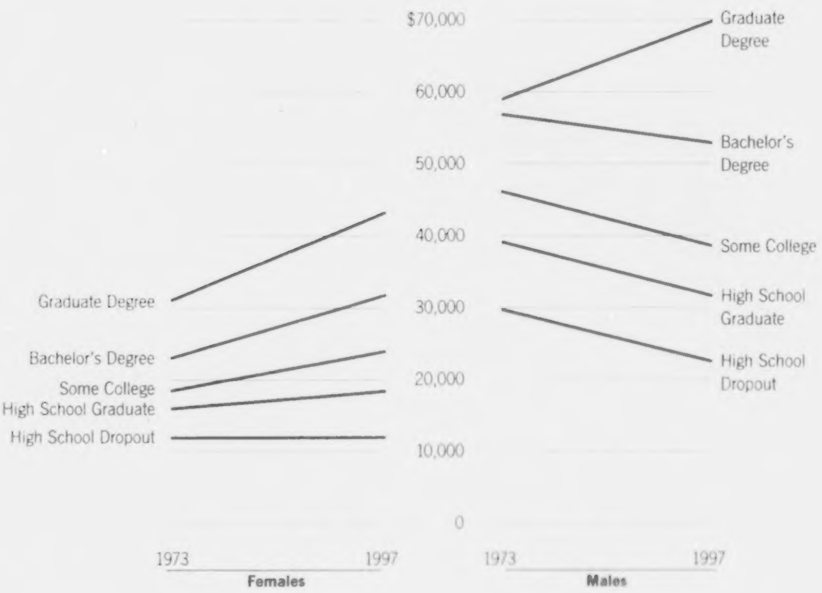
51% of workers with associate's degrees (or some college) earn less than $36,000, compared with 32% of workers with bachelor's degrees

ETS analysis of Current Population Survey (March 1998)

FIGURE 2

College-Educated Workers Are Getting a Growing Share of the Economic Pie

Earnings in constant 1996 dollars



ETS analysis of Current Population Survey (March 1974; March 1998).

Earnings and Gender

Gender plays a role in earnings as well. For both men and women, the real value of a college education has increased, especially for those with graduate education *(see Figure 2; also see Table B in Appendix).* The earnings differences between people with different levels of education have increased even more. At every education level, however, women still have lower average earnings than men *(see Figure 3).*

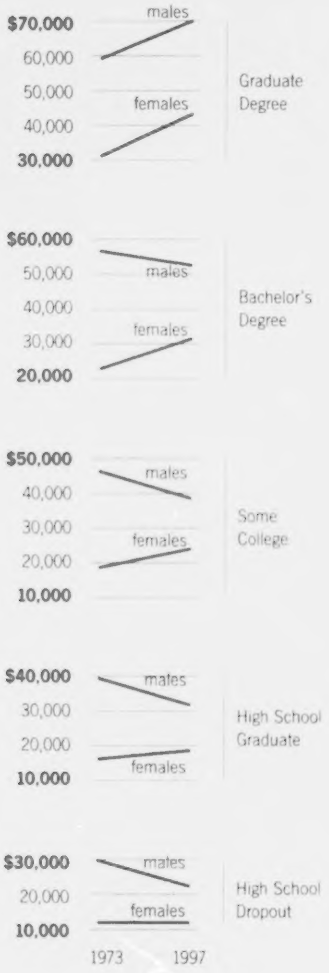
But the picture is changing. With the exception of those with graduate degrees, earnings among men have declined since 1973, especially for those without a bachelor's degree. Women, on the other hand—including female high school dropouts—have experienced earnings *increases* at every education level. Moreover, women with some college or with bachelor's degrees have experienced larger earnings increases than their male counterparts, although that trend reverses for men and women with graduate education.

Gender plays a role in earnings as well. While women have made gains across the board, women still have lower average earnings—at every education level—than men.

FIGURE 3

Gender, Education, and Earnings, 1973 and 1997

Earnings in constant 1996 dollars



ETS analysis of Current Population Survey (March 1974; March 1998).

These changes can be traced to several factors. Historically, differences in male and female wages stemmed, in part, from the fact that women were paid less than men in the same jobs. But there were other, more critical causes:

- Women were segregated into lower-paying occupations.
- Women didn't work full-time for as many years in their careers as men.
- Women worked fewer hours each year than men.[7]

These causes are beginning to erode.

Although women have yet to achieve wage equality with men, opportunities for women have increased for two reasons. First, the barriers to women in managerial and professional jobs have begun to disappear. Second, the occupational structure has shifted growth from traditional male jobs, especially in manufacturing, to work in education, health-care, and business services—fields that are more accessible to women.

Thus, women have not only benefited from job growth in their traditional sources of employment, but they have been able to break out of traditional female occupations and into new ones. In 1959, for instance, 76 percent of women with bachelor's degrees worked in education or health care. By 1997, that number had fallen to 36 percent.

Economic progress among women also is due to the fact that women are working smarter. A greater percentage of women than men have associate's degrees and some college. The percentage of men and women with bachelor's and graduate degrees is rapidly approaching equality, and the rate of increase in bachelor's and graduate degree attainment among women exceeds that of men *(see Tables 1 and 2; see also Table A in Appendix).*

Women also are working longer. In the 1970s, few women stayed continuously in the labor force. Only 4 percent worked full-time, full-year in at least eight out of every ten years. In fact, prime-age women in the paid labor force averaged only 870 hours per year—equivalent to less than a half-time job. In 1997, prime-age women who worked in the paid labor force at any time during the year averaged 1,789 hours. By comparison, prime-age male workers in 1997 averaged 2,181 hours of work, 23 percent more than women.

We can get a clearer picture of some of the links between education and earnings, and between earnings and gender, by looking at how the labor market has changed in recent years.

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[7] It has never been clear whether women are concentrated in occupations that pay less or whether some occupations pay less because women are concentrated in them. Secretaries are a case in point. Secretarial work was associated with high status and pay until it became a female occupation after the 1920s. For an historical review, see Levy and Murnane, 1992; and Blau, 1998.

Where the Jobs Are

The increasing value of a college-level education stems from fundamental shifts in the labor market.

Early in this country's history and, in fact, pretty much throughout our first 200 years, a job was easy to find—especially an entry-level low-skilled job. That's why the United States has been such a magnet for all of us.

The American dream—and, for the most part, the American reality—have always been that, even without much formal education, people could start at the bottom and work their way to the top. Even in the modern industrial era, when college became a requirement for the growing numbers of professionals, a high school diploma coupled with hard work was enough to secure good jobs for most of the rest of us.

In the past 40 years, however, the nature of the global economy has changed. And the rules have changed correspondingly.

These days, entering the job market can be likened to pole vaulting. The bar remains very low for entry-level jobs with low pay—all one needs is a high school diploma, at most. The bar is set quite a bit higher for jobs in the middle tier of the economy, which require at least some college. And for the really good jobs, the bar is far above one's head—and the only way to vault it is with a college degree.

These days, entering the job market can be likened to pole vaulting. For the really good jobs, the bar is far above one's head—and the only way to vault it is with a college degree.

And it's those high-bar jobs that are growing, which is why access to college has become a prerequisite for economic success. The proportion of low-skilled services jobs is *not* growing. And the number of high-paying blue-collar jobs available to workers with high school diplomas is actually *shrinking*. Job growth is concentrated in managerial, professional, technical, health-care, and education occupations, which generally require college-level skill *(see Figure 4; see also Table C in Appendix)*.

In recent years, these changes—both the changes in the kinds of jobs available and the skills required to get them—have been dramatic. One way to examine this is to divide the economy into six functional areas based on what people actually do and the most common work site of that activity:

- offices
- hospitals/classrooms
- high-tech workplaces

- lunch counters, retail stores, hotels, stockrooms, and other places where low-skilled services work is done
- factories
- farm jobs

A look at the share of total employment in each of these areas shows that office employment has grown the most—from 30 percent in 1959 to 38 percent in 1997. Hospital and classroom jobs have grown somewhat less. The *number* of high-tech jobs hasn't grown much at all, but there are still a lot of new openings as the focus shifts from crafts workers to information technology.

By contrast, factory employment declined from 32 to 17 percent over the same period. Farm jobs continue to disappear. Low-wage services jobs and counter jobs have held steady at about 20 percent of all jobs.

At the same time that jobs have been shifting from farm and factory to offices, hospitals, and classrooms, educational requirements have been rising. In 1959, only 20 percent of prime-age workers had some postsecondary education. Today, that figure has risen to 56 percent.

This increase in educational requirements appears in all sectors of the economy, but has been most pronounced in the fastest-growing job sectors. In high-tech jobs, 86 percent of the workforce have at least some college. In education and health care, fully 74 percent have some postsecondary training, as do 66 percent of those working in offices.

In other sectors of the economy—the ones that *aren't* growing—college attendance is less required. Only 27 percent of farm and extractive workers, 34 percent of industrial workers, and 39 percent of low-skilled services workers have a college education.

Let's take a closer look.

Low-Skilled Services Jobs

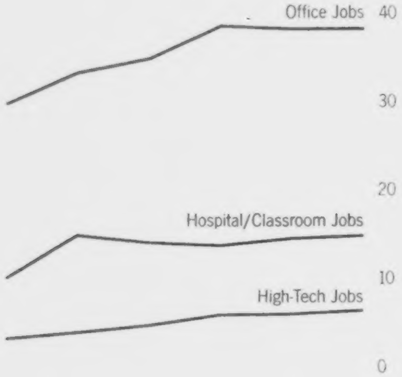
Low-skilled services workers make up the new proletariat, at the bottom of today's earnings and skill hierarchy. These include cashiers, retail clerks, stockers, cab drivers, and cleaners—positions that typically require low skills and pay correspondingly low wages.

FIGURE 4

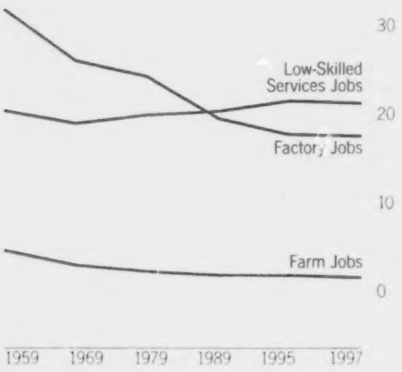
Education and Occupation, 1959–1997

Percent of total employment

More than two-thirds of workers in growing, good-paying occupations have postsecondary education:



Only one-third of workers in these declining or low-paying occupations have postsecondary education:



ETS analysis of 1960 Census and Current Population Survey (March 1970–March 1998).

We have a lot of these jobs in the United States. They are usually held by workers without any postsecondary education, they are easy to get, pay poorly, and carry few or no benefits *(see Figure 5)*.

The share of low-skilled services jobs has not grown since Eisenhower was president, remaining near 20 percent (today, about 28 million) of the available work opportunities.

Hispanic workers are almost twice as likely as non-Hispanic Whites to be stuck in one of these low-paying positions. Almost a quarter of all Hispanic workers today have low-skilled services jobs, compared to a seventh of all non-Hispanic White workers. And the concentration of Hispanic workers in this employment category is growing, not shrinking.

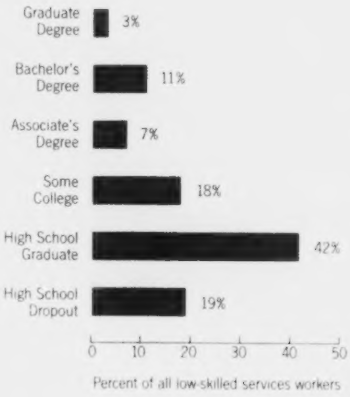
Almost 40 percent of low-skilled services workers have attended college, but most have not yet attained degrees. About half are under the age of 25 and will move on to better jobs when they complete their education. A substantial share, however—especially those *over* the age of 25—will remain stuck in low-wage jobs because of low educational attainment.

This is especially true for Hispanic men. The combination of women's increasing educational attainment and their greater access to jobs in the fast-growing office, education, and health-care sectors have made women as a group—but not Hispanic women—less dependent than men on low-skilled services jobs. At the same time, the decline in the number of low-skilled (but highly paid) blue-collar factory jobs has made low-skilled men—*especially* Hispanic men--*more* dependent on low-skilled services work than ever before.

More specifically, the share of low-skilled services jobs among non-Hispanic White females declined from 21 percent in 1973 to 16 percent in 1997, offset by a slight increase in the presence of non-Hispanic White males (from 10 to 12 percent). Even though they have not enjoyed the same degree of success as non-Hispanic White females, the share of Hispanic women in these jobs rose only marginally, from 23 to 25 percent. The share of Hispanic men in low-skilled services jobs, however, rose from 15 to 23 percent between 1973 and 1997.

FIGURE 5

Only 39% of Low-Skilled Services Workers Attend College



ETS analysis of Current Population Survey (March 1998).

Factory Jobs

Unlike low-skilled services jobs, which are growing in absolute numbers but not as a proportion of all jobs, factory jobs are decreasing both proportionally *and* absolutely. Between 1973 and 1997, the share of factory jobs fell from 29 to

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19 percent of all jobs. That translates to 12 million fewer factory jobs in 1997 than would have existed had the 1973 share of employment continued.

The factory jobs that remain are being filled by workers with skills beyond high school, as new technology and high-performance work processes combine to enable manufacturers to produce more—using fewer, but more highly skilled, workers.

Since 1960, the United States has increased real manufacturing output by more than $2 billion annually, while cutting the share of production workers by nearly *half*.[8] At the beginning of that period, only 8 percent of workers on the factory floor had any college. By 1997, that proportion had increased to more than 33 percent *(see Figure 6)*.

Hispanics have been the hardest hit by these declines in industrial jobs and by the remaining jobs' increased educational requirements. Low-skilled Hispanic men, especially, have always relied more than any other group on factory jobs as their path into the American middle class. And that path has obviously become more difficult.

The first year that the Census Bureau identified Hispanics as a separate group was 1973. Since then, the share of the overall prime-age workforce employed in industrial production has fallen 9 percentage points, from 26 percent in 1973 to 17 percent in 1997. For Hispanics, the drop was a full 15 percentage points, from 43 to 28 percent, compared to a drop from 30 to 19 percent for non-Hispanic Whites.

High-Tech Jobs

This loss in factory employment is not being offset by growth in high-tech jobs, either within or outside of manufacturing.[9] Our work may be getting more high-tech, but the technology sector is not generating as many new jobs as other parts of the economy. It appears that fewer and fewer of us are needed to make, maintain, or repair the technology that more and more of us use.

This growing productivity has held the number of jobs requiring technical education to around 10 million of the total 133 million jobs in the U.S. economy.

The high-tech job market is another set of highly skilled jobs that require some college, a bachelor's degree, or graduate education. In fact, it's the *most* demanding—86 percent of high-tech workers have at least some college *(see Figure 7)*.

[8] Trade is another factor that both eliminates and creates jobs, especially in manufacturing. For instance, if manufacturing jobs were still the same share of all U.S. jobs that they were in 1959, at their peak, there would be roughly 15 million more manufacturing jobs than there are now.

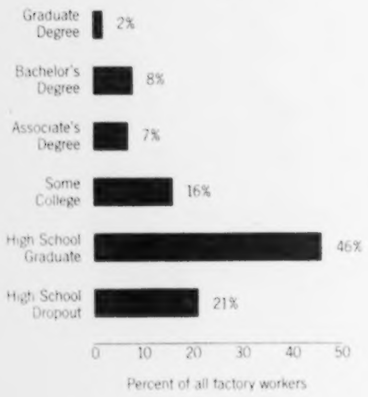
Of these 15 million, about 2 million were probably lost to trade and the other 13 million were lost to productivity improvements. Jobs lost to trade tend to be the low-skilled, low-wage jobs; jobs gained from trade tend to be more highly skilled and highly paid.

On balance, trade probably has more impact on wage *levels* than on the number of jobs. Some estimates suggest that trade accounts for as much as 30 percent of the increase in wage disparities since the 1970s. This is because trade tends to drive down the wages of low-skilled labor and increase the relative earnings of skilled workers in manufacturing and in the economy as a whole.

[9] Although there is much discussion about the importance of high-tech employment, it is rarely carefully defined. This document defines high-tech jobs to include only those jobs that are heavily science-based and/or those that utilize specialized machinery and equipment. These jobs require, at the least, a bachelor's degree (e.g., engineers, chemists, architects, computer system analysts, etc.) and often some specialized postsecondary education (e.g., computer programmers, medical and other technicians, cad-cam operators, etc.). So, while virtually all workers today have *some* contact with technology (especially information technology), this definition of high-tech workers limits their number to those with some special expertise, education, and training.

FIGURE 6

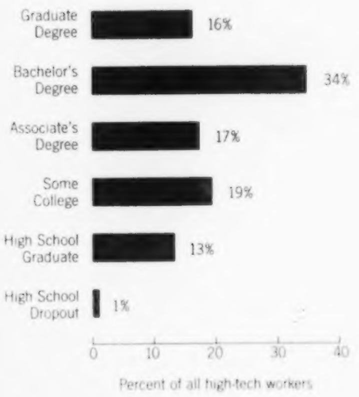
Only 33% of Factory Workers Have Some College



ETS analysis of Current Population Survey (March 1998).

FIGURE 7

86% of High-Tech Workers Have Some College



ETS analysis of Current Population Survey (March 1998).

In 1997, only 3.5 percent of Hispanics held high-tech jobs, compared to 7.7 percent of non-Hispanic Whites. Underrepresentation of Hispanic workers is especially severe in high-tech jobs that require college or graduate degrees, due to unequal access to the types of postsecondary education required for science and technology jobs. Only 1.3 percent of Hispanics had college-educated high-tech jobs, compared to 4.3 percent of non-Hispanic Whites.

So, if factory jobs are actually declining, low-skilled services jobs are merely holding steady, and high-tech jobs are growing but don't account for a substantial share of the net new jobs, where *are* all those new jobs we keep hearing about? And who is hiring the growing numbers of college-educated workers?

Factory jobs are declining, low-skilled services jobs are merely holding steady, and high-tech jobs are growing only moderately. So where are all the new jobs we keep hearing about? In education, health care, and office jobs.

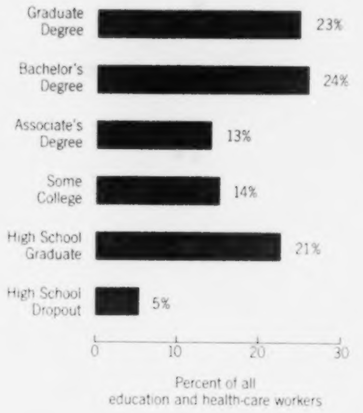
Education and Health-Care Jobs

Part of the answer is obvious, if you consider the new economy's increased educational requirements and the aging of the baby boom generation. More of us are working in education and health care.

And this trend is reinforced by the fact that productivity is not rising as fast in these fields as in other jobs. New technology and work

FIGURE 8

74% of Education and Health-Care Workers Have Some College



ETS analysis of Current Population Survey (March 1998).

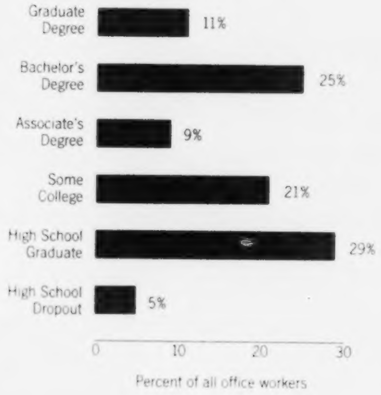
processes have *not* reduced the number of workers it takes to provide education or health care for the American population. Since 1959, health care has grown from 3.7 to 7.5 percent, and education from 5.6 to 8.7 percent of all jobs.

Most of these education and health-care jobs require higher education. Seventy-four percent of education and health-care workers have at least some college—a percentage that is almost as high as that of high-tech jobs *(see Figure 8)*. More than 54 percent of education and health-care workers combined are professionals with a two-year or four-year education.

Hispanics are underrepresented in these fields. Only 10.4 percent of the Hispanic workforce are employed in education or health care, compared to 14.5 percent of the general population. Moreover, Hispanics in these jobs are more likely to be low-paid orderlies and cafeteria workers than to be nurses, doctors, or teachers. Only a third of all Hispanics in education and health care have college-educated managerial and professional jobs.

FIGURE 9

Two-Thirds of All Office Workers Have Some College



ETS analysis of Current Population Survey (March 1998).

Office Jobs

Education and health-care jobs are increasing, but by far the largest, fastest-growing, and best-paid group of employees are office workers. Management, accounting, editing, sales, marketing, and other office jobs number 51 million—*38 percent* of the 133 million jobs in the American economy (Carnevale and Rose, 1998).

Let's put that in perspective. Information technology will add 750,000 jobs by 2006—but office jobs will grow by 4 *million*. These office jobs pay half again as much as jobs in other economic sectors. And 66 percent of office workers have at least some college education, while 36 percent have at least a bachelor's degree *(see Figure 9)*.

Hispanics are not getting their share of the new office jobs. Only a quarter of all Hispanic men and a third of all Hispanic women are employed in office work, compared to almost a half of all non-Hispanic White workers.

Earnings and the Hispanic Education Gap

This breakdown of the workforce underscores the increasingly important role education plays in Hispanic economic opportunity. Let's look a bit more closely at this relationship.

Educational Achievement and Attainment Among Hispanic Youth and Young Adults

To understand the educational characteristics of the Hispanic population, we must clearly distinguish between Hispanic youth and adults.

Most of America's Hispanic youth are born in the United States *(see Figure 10)* and attend U.S. elementary/secondary schools. The educational characteristics of these youth reflect their educational experiences in American schools and society.

This is *not* the case among Hispanics over the age of 18. Over half of all Hispanic adults are immigrants to the United States, and many did not arrive here until after age 18 *(see "Immigration and the American Economy at the Millennium," page 42)*. Their educational performance cannot be taken to reflect the Hispanic experience in the U.S. "first-chance" elementary/secondary and postsecondary education system.[10]

When we look solely at outcomes for Hispanic youth in U.S. schools, there is once again both good news and bad.

The good news is that Hispanic youth are vastly better prepared to compete in U.S. labor markets than adult Hispanic immigrants. Among Hispanics between the ages of 25 and 29 who were born in the United States, approximately 80 percent have finished high school. Of Hispanics in the same age group who immigrated—most often after age 15, less than half have finished high school *(see Figure 11; see also Table D in Appendix)*.

The bad news is that Hispanic youth who are native-born or who immigrated at an early enough age to begin their schooling in U.S. schools tend not to perform as well as their non-Hispanic White counterparts. Large gaps in academic achievement appear in elementary school and do not diminish as schooling progresses. For instance, the NAEP data indicate that the average

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[10] In the United States, we invest more than twice as much in the elementary/secondary education system as we do in the education and training of adults, especially adult immigrants. In 1997, for instance, public spending for elementary/secondary and postsecondary education was $500 billion, compared to less than $3 billion for job training for adults or out-of-school youth. Another $3 billion of public investment in adult education and training is financed through the mainstream education system, in the form of about 4 million Pell Grants that go to students over the age of 25. Employers add about $220 billion in private funding for adult education (roughly $70 billion for formal job training and $150 billion in informal on-the-job training)—but the vast majority of these funds goes to the most highly educated employees.

Despite the growing need for lifelong learning, this imbalance in our human capital investment has not changed significantly since World War II. It is especially significant to Hispanics and relates directly to the low levels of educational attainment of adult Hispanics, particularly adult immigrants (Carnevale and Jacobson, 1998).

(continued on next page)

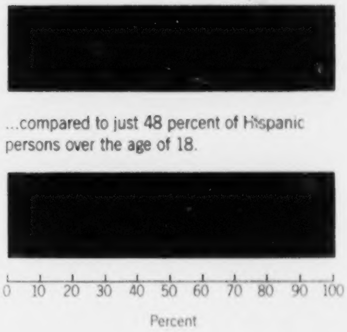
mathematics scale score of Hispanic 9-year-olds is about 22 scale points below non-Hispanic White 9-year-olds *(see Figure 12)*. This puts them roughly two years behind in math capability at age 9, and that same gap remains at age 17.

FIGURE 10

Hispanic Children Are Mostly U.S.-Educated

Eighty-seven percent of Hispanic persons under the age of 18 were born in the United States...

...compared to just 48 percent of Hispanic persons over the age of 18.



Adapted from del Pinal and Singer (1997).

Hispanic youth also do not move as rapidly through grade levels as do non-Hispanic White students. Seventy-two percent of non-Hispanic White 15-year-olds are enrolled in the tenth grade or higher, compared to only 66 percent of Hispanic 15-year-olds *(see Figure 13)*. Eighty-four percent of non-Hispanic White 20-year-olds have finished high school, compared to 73 percent of Hispanic 20-year-olds (NCES, 1996a). And among 25- to 29-year-olds who have started college, half of the Whites[11] have their degrees, compared to a third of the Hispanics.

Education and the Earnings of Prime-Age Hispanic Workers

The adult education gap between Hispanics and other groups, thus, is a product of a double whammy, reflecting both the lower educational attainment of native-born generations and the educational performance and history of the large numbers of adult immigrants. In 1997, for example, 39 percent of Hispanic prime-age workers lacked high school diplomas, compared to 7 percent of non-Hispanic Whites. Only 33 percent of Hispanic prime-age workers had some postsecondary education, compared to 59 percent of non-Hispanic Whites.

This education gap translates directly into an earnings gap since, as we have seen, the rising demand for educational credentials among prime-age workers puts many of the highest-paying jobs out of reach for Hispanics with no postsecondary education. In 1997, prime-age Hispanic male workers had an average income of $26,900, compared to $43,900 for non-Hispanic White males. Hispanic women earned $18,300; non-Hispanic White women earned $25,900.

As we noted earlier, the picture is somewhat different for Hispanic men and women, and this is reflected in these differences in earnings gaps between them and their non-Hispanic White counterparts. Over time, the shift from factory jobs to education, health-care, and office work has created new opportunities for Hispanic women, even while it has resulted in a decline in earnings for Hispanic males. Between 1979 and 1997, average earnings for Hispanic women rose from $15,300 to $18,300 (in constant dollars), while average wages for Hispanic males fell from $29,400 to $26,900.

From a policy perspective, there are, thus, two implications. We should look for ways that we can bring new resources to adult education, and we must recognize that the dominance of the mainstream education system means that most of our leverage will be found in improving outcomes through the traditional schooling system and expanding access to higher education for adult students (Carnevale, 1998; Carnevale, Desrochers, and Fry, 1998).

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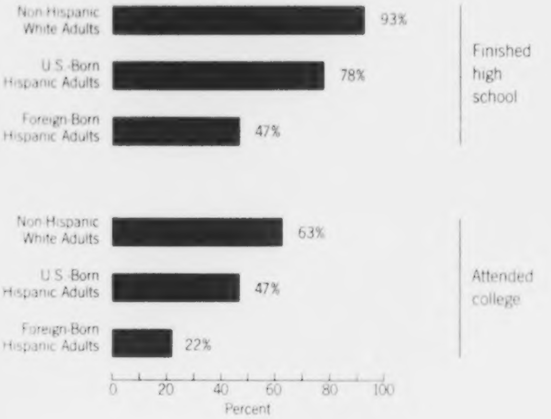
[11] Whites in this case include some Hispanics who identify themselves as White in the Current Population Survey done by the U.S. Bureau of Census. Throughout this study, non-Hispanic Whites refer to Whites who also report they are not Hispanic.

FIGURE 11

Among Hispanic Adults, U.S.-Born Tend to be Better Educated Than Foreign-Born



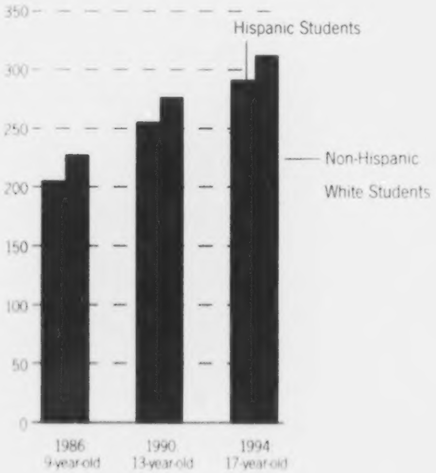
ETS analysis of Current Population Survey (April 1998).

The adult education gap between Hispanics and other groups is a product of a double whammy—the lower educational attainment of native-born generations, and the large numbers of less well-educated adult immigrants.

FIGURE 12

Gaps in Academic Achievement Remain Through High School...

NAEP average mathematics scale score

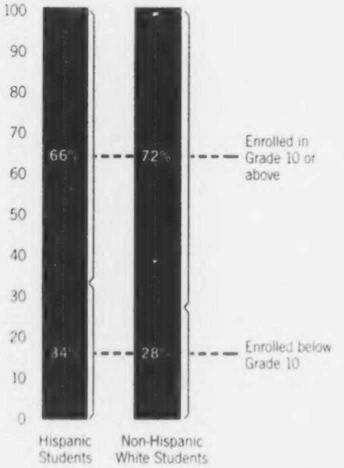


Adapted from National Center for Education Statistics, NAEP 1996 Trends in Academic Progress.

FIGURE 13

...And Are Corroborated by Gaps in Grade Advancement

Percent of 15-year-old cohort

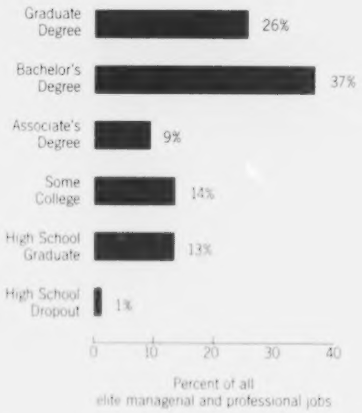


ETS analysis of Current Population Survey (October 1996).

FIGURE 14

86% of Elite Managerial and Professional Jobs Require At Least Some College

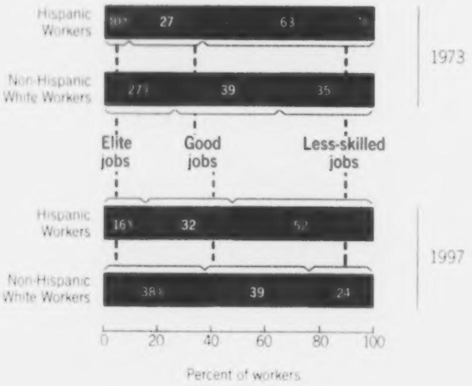
The average pay for elite jobs is $59,000 for men and $34,000 for women.



ETS analysis of Current Population Survey (March 1998)

FIGURE 15

Compared to Non-Hispanic White Workers, Hispanic Workers Continue to Have Less Access to Elite and Good Jobs



ETS analysis of Current Population Survey (March 1998)

Elite Jobs, Good Jobs, and Less-Skilled Jobs

Let's look once more at the job market. In addition to analyzing it by type of work and worksite, as we did earlier, we can learn something by analyzing jobs according to earnings. The earnings hierarchy in the American labor market divides roughly into three segments.

Elite managerial and professional jobs. These are the highest-paid jobs and they go primarily to people with bachelor's degrees. Thirty million of all prime-age workers are in these jobs. More than 60 percent of them have bachelor's degrees; another 23 percent have some college *(see Figure 14).* On average, these jobs pay $59,000 for men and $34,000 for women.

In 1997, only 16 percent of prime-age Hispanic workers were in elite managerial and professional jobs, compared to 38 percent of non-Hispanic Whites *(see Figure 15).* While the overall share of Hispanics in elite jobs grew by 6 percentage points between 1973 and 1997, that growth was due entirely to an increasing share of females in elite jobs. By 1997, a higher proportion of Hispanic women (19.8 percent) than men (13.3 percent) had elite jobs. This relationship was skewed by the education and health-care fields: Equal proportions of Hispanic men and women had managerial and professional jobs in businesses, but the percentage of Hispanic women who held managerial and professional jobs in education and health care was *triple* the percentage of Hispanic men who held these jobs.

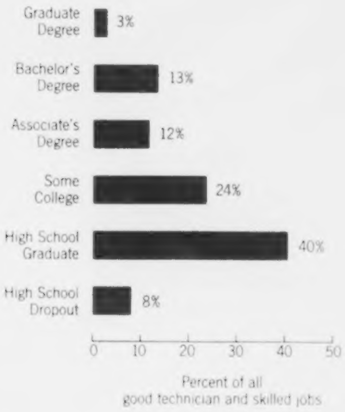
Good jobs held by crafts workers, technicians, clericals, and others. These are well-paid jobs, paying an average of $37,000 for men and $22,000 for women. They go mainly to people who have some college but no degree. More than 16 percent of workers in these jobs have bachelor's degrees; 36 percent have some college but no bachelor's degree *(see Figure 16).*

Non-Hispanic Whites and Hispanics have more equal shares of jobs in the "good" category. Thirty-two percent of all Hispanics held good jobs, compared to 39 percent of non-Hispanic Whites. Between 1973 and 1997, the share of Hispanics with good jobs increased by about 5 percent, divided equally between Hispanic men and women.

FIGURE 16

Half of All Good Technician and Skilled Jobs Require At Least Some College...

The average pay for good jobs is $37,000 for men and $22,000 for women.

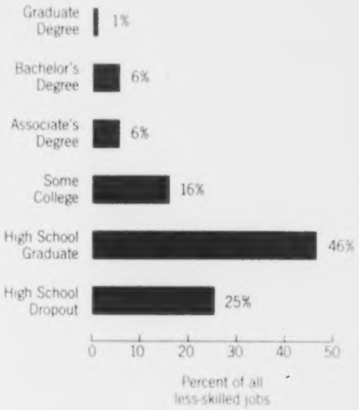


ETS analysis of Current Population Survey (March 1998).

FIGURE 17

...While Only 29% of the Lowest-Paid Less-Skilled Jobs Require At Least Some College

The average pay for these jobs is $25,000 for men and $13,000 for women.



ETS analysis of Current Population Survey (March 1998).

Less-skilled jobs in retail, personal services, and other minimally skilled occupations. These are the low-wage jobs, paying an average of $25,000 for men and $13,000 for women. The category includes machine operators, salesclerks, janitors, and hotel workers. Only 7 percent of these workers have college degrees and 22 percent have less than a bachelor's degree. Most of these workers are in transition to more skilled jobs or are combining work and schooling *(see Figure 17).*

A much higher proportion of Hispanics are in these less-skilled jobs than are non-Hispanic Whites. Fifty-two percent of prime-age Hispanic workers held these lowest-paid jobs, compared to 24 percent of non-Hispanic Whites in 1997 *(see Figure 15).*

The share of prime-age Hispanic workers in less-skilled jobs declined from 63 to 51.5 percent between 1973 and 1997. This movement out of the bottom tier of the job market was greater for Hispanic women than men, largely because Hispanic women started out farther behind. In 1973, 68 percent of Hispanic women were employed in less-skilled jobs, compared to 60 percent of Hispanic men. In 1997, the differences had disappeared.

The earnings hierarchy in the American labor market divides roughly into three segments: elite managerial and professional jobs; good jobs held by crafts workers, technicians, clericals, and others; and less-skilled jobs in retail, personal services, and other minimally skilled occupations.

Immigration and the American Economy at the Millennium

In the 1990s, immigration to the United States has nearly reached the historic levels experienced at the beginning of this century. If this continues, we can expect the 1995 estimate of 263 million U.S. residents to grow to 387 million by 2050, with immigrants and their children making up about 80 million of the 124 million new residents.

If immigration continues at its historic high level, we can expect that more than half of the U.S. population increase between now and 2050 will be made up of immigrants and their children. Obviously, this will have wide-ranging effects—but what those effects will be is *not* obvious.

Obviously, this will have wide-ranging effects, not only on population size but on age distribution and other important demographics. What those effects will be, however, is *not* obvious. While there are some who fear that increased immigration will threaten current U.S. residents' jobs and place an additional burden on current taxpayers, those fears are largely unfounded.

Almost 40 percent of recent adult immigrants to the United States do not have a high school diploma. As a result, the U.S. workers who are most likely to be adversely affected by immigration are those who are most easily replaced by immigrants, namely unskilled labor. This is a relatively small portion of the population: More than 90 percent of all U.S.-born young adults have at least a high school education. Thus, the vast majority of Americans are not directly in competition with immigrant labor.

Most Americans, therefore, actually benefit from immigration. The economic analysis is very similar to the assessment of international trade: When immigrants produce goods and services that would not otherwise have existed in this country, native-born workers are unaffected and native-born consumers gain from the increased availability and lower price of the product. Even when immigrants engage in activities similar to those of some native-born workers, there are both gainers and losers. While workers in direct competition with immigrant labor may see a slight negative effect on job availability and salary rates, consumers of the product gain from lower prices. Owners of capital gain as well. Moreover, some native workers gain because they are employed in pursuits complementary to the immigrant labor, such as managers and supervisors and skilled labor.

Thus, the gains significantly outweigh the costs. One estimate suggests that immigrants produce goods and services that are worth $10 billion more than they are paid (National Research Council, 1997).

But what is immigration costing the country in terms of supportive services?

Prior to welfare reform, evidence consistently showed that immigrant families were more likely than native-born families to use means-tested programs such as welfare, food stamps, and Aid to Families and Dependent Children (AFDC). But it is important to note that immigrants' higher usage of these programs relates to their lower incomes and larger numbers of children. Among otherwise similar immigrant and native families, immigrant families are less likely to participate in such programs.

Moreover, use of these programs by immigrants appears to be on the wane, perhaps in response to changes in federal eligibility criteria. A recent Urban Institute analysis reports that noncitizens' use of food stamps has dropped substantially since 1994—more than citizens' use of food stamps (Fix and Passel, 1999). Interestingly, noncitizens' use of welfare has declined as well, even though eligibility criteria did not change.

Thus, while economic experts are far from unanimous in their quantitative assessments of the economic effects of immigration, and the data are still inconclusive, it seems evident that, on an aggregate basis, immigration adds far more to our economy than it costs. Different areas of the country, however, are affected differently. While the economic benefits of immigration are widely distributed, the concentration of immigrants in particular state and local areas results in an unequal distribution of educational costs. This inequality of costs among states and localities suggests the need for national and regional—as opposed to strictly local—funding of the educational programs that serve immigrant families.

While economic experts are far from unanimous in their assessments of the economic effects of immigration, it appears that immigration adds far more to our economy than it costs. One estimate suggests that immigrants produce goods and services that are worth $10 billion more than they are paid.

Education and the Hispanic Unequal Pay Puzzle

So, to sum up our breakdown of jobs by earnings: Compared to non-Hispanic Whites, Hispanics have less access to the highest-paid elite jobs and well-paid good jobs, and are more concentrated in low-paid, less-skilled jobs *(see Figure 15).*

But there's an additional complication to examine.

Hispanics who do get elite managerial and professional jobs aren't paid as much as non-Hispanic Whites in the same jobs. Non-Hispanic White men in managerial and professional jobs had average earnings of just under $60,900, while Hispanic men in these jobs earned $48,300. For females, the gap was much smaller—non-Hispanic White women professionals and managers earned $34,600 and Hispanic women earned $31,000.

Hispanics also were paid less than non-Hispanic Whites in the other two categories as well. Non-Hispanic White men averaged $37,900 in good jobs and $27,000 in less-skilled jobs. The corresponding figures for Hispanic men were $28,900 and $20,000, respectively. Non-Hispanic White women earned $22,300 in good jobs and $13,300 in less-skilled jobs, while Hispanic women earned $20,900 and $11,900, respectively.

Compared to non-Hispanic Whites, Hispanics have less access to the highest-paid elite jobs and well-paid good jobs, and are more concentrated in low-paid, less-skilled jobs.

To look at the numbers a different way: Hispanic men in elite and good jobs earned approximately 25 percent less than their non-Hispanic White counterparts, and Hispanic men in *low-wage* jobs earned 32 percent less than non-Hispanic Whites. Hispanic women were closer in pay to non-Hispanic White women, with the difference being less than 10 percent in elite and good jobs and just 12 percent in less-skilled jobs.

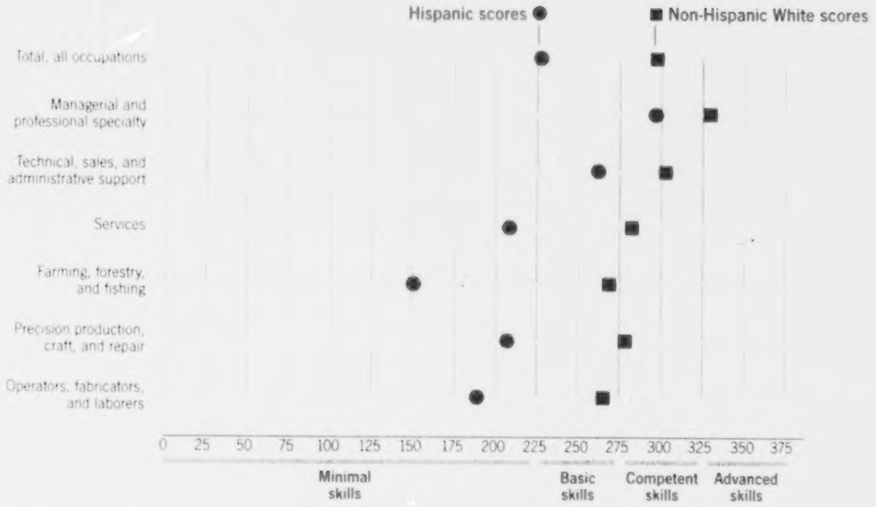
Why do Hispanics earn less than non-Hispanic Whites even when working in the same occupations? The easy answer is discrimination. The general consensus among those who study this phenomenon, however, is that there are a variety of contributing factors. Hispanic workers are younger than non-Hispanic White workers and have not captured the wage increases that inevitably come with experience. Hispanics also tend to work in areas and industries where wages are generally lower. And, probably most importantly, lower levels of educational attainment play a major role.

The lower educational attainment (years of schooling) and achievement (skill levels) of Hispanic youth relative to non-Hispanic White youth have lifelong implications for Hispanic success in the U.S. labor market. Studies disagree on precisely how much of the Hispanic/non-Hispanic White wage differential can be attributed to differences in educational attainment, but the consensus view

FIGURE 18

Prose Skills and Occupation, 1992

Mean prose skill scores of workers, age 16 to 64



ETS analysis of National Adult Literacy Survey (1992).

is that 75 to 100 percent of the earnings differential—after accounting for age differences—relates to inadequacies in the skills Hispanics bring to the labor market (Neal and Johnson, 1996).

Other data lend support to this view. According to NALS, the skills of 16- to 64-year-old Hispanic workers employed in a particular occupation are, *on average,* lower than the skills of non-Hispanic White workers in the same occupation *(see Figure 18; see also Table E in Appendix).* Thus, because they tend to be overrepresented in the low end of the skill ranges for each occupational category, Hispanics also tend to be paid less than others in that category.

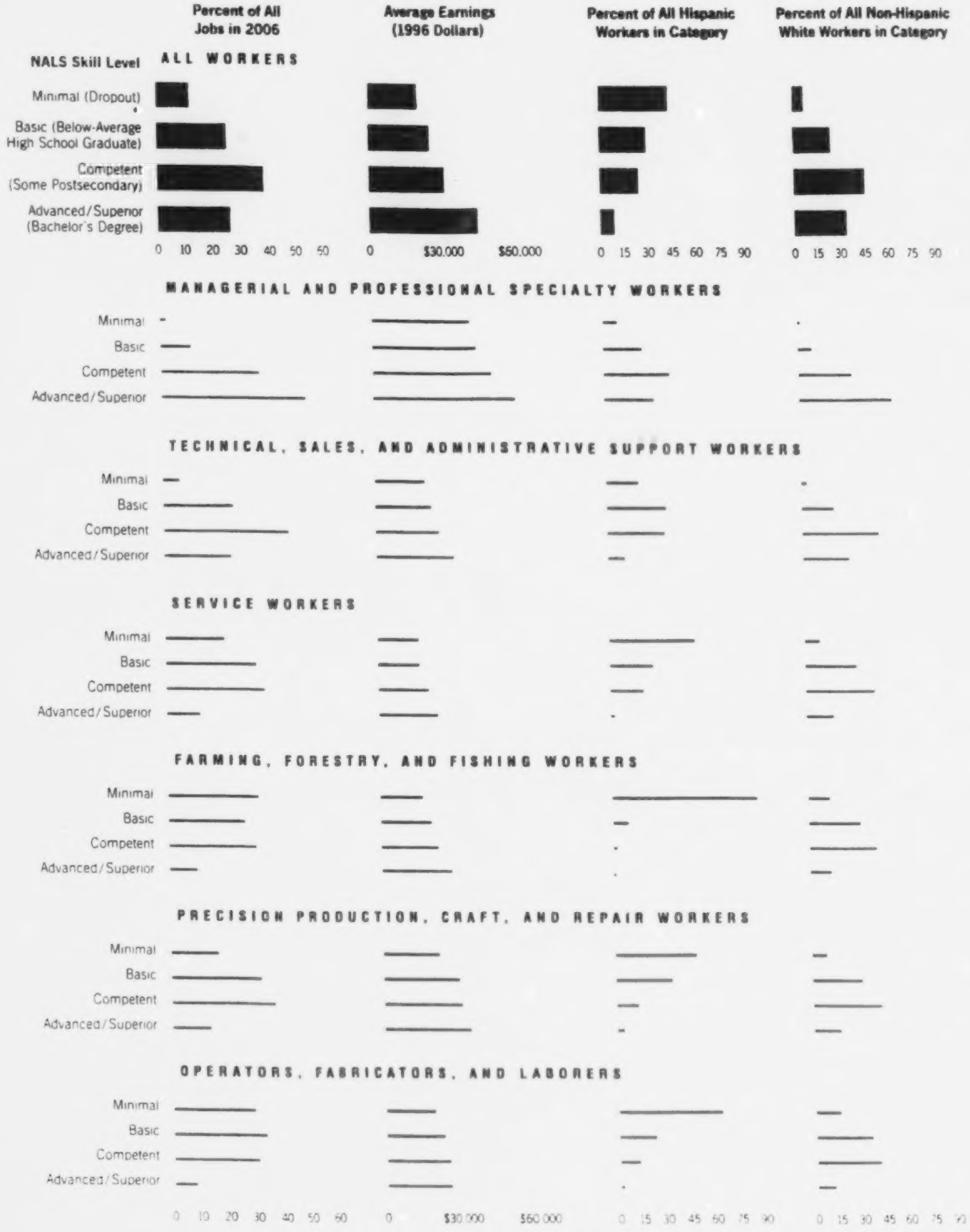
It is important to note, however, that these data are averages. They must not be interpreted as saying that all Hispanic workers are less skilled than non-Hispanic White workers. Although the average skill level of Hispanic workers is at the low end of the basic skill range, similar to below-average high school graduates, nearly a third have skills similar to those usually exhibited by people with some post-secondary education or a bachelor's degree *(see Figure 19).*

Why do Hispanics earn less than non-Hispanic Whites even when working in the same occupations? Probably the most important factor is differences in educational level.

FIGURE 19

Lower-Skilled Workers Earn Less in Every Occupation

Year-round 16- to 64-year-old workers; earnings are in 1996 dollars



ETS analysis of National Adult Literacy Survey (1992), Current Population Survey (March 1997), and Bureau of Labor Statistics Occupational Projections, 1996-2006

Within every occupation, there are Hispanic workers who exhibit the highest skill levels among those in that field. Among managerial and professional specialty workers, 30 percent of Hispanic workers have advanced or superior skills similar to those exhibited by bachelor's degree holders. The skills of these Hispanic workers exceed the skills exhibited by 42 percent of non-Hispanic White managerial and professional specialty workers. Similarly, nearly half of all Hispanic workers in the technical, sales, and administrative support occupations have skills typically exhibited by people with at least some postsecondary education, skills that are higher than nearly a quarter of non-Hispanic White workers in the same occupation.

On the other hand, more than half of all Hispanic workers in some of the lower-paid occupations—services; farming, forestry, and fishing; precision production, craft, and repair; and operator, fabricator, and laborer occupations—have skills similar to those exhibited by school dropouts. And in every occupation, the proportion of Hispanic workers with these minimal skills is at least four times as great as the proportion of non-Hispanic White workers with similar skills.

In every occupation also, workers with the highest skills earn more than those with lower skills. As a result, Hispanic workers earn less, on average, than non-Hispanic White workers in the same occupation. The combination of lower skills within each occupation and a greater concentration of Hispanic workers in less-skilled occupations results in lower earnings for Hispanic workers overall, when compared to non-Hispanic Whites.

The combination of lower skills within each occupation and a greater concentration of Hispanic workers in less-skilled occupations results in lower earnings for Hispanic workers overall, compared to non-Hispanic Whites.

The Growing Importance of Academic Skills

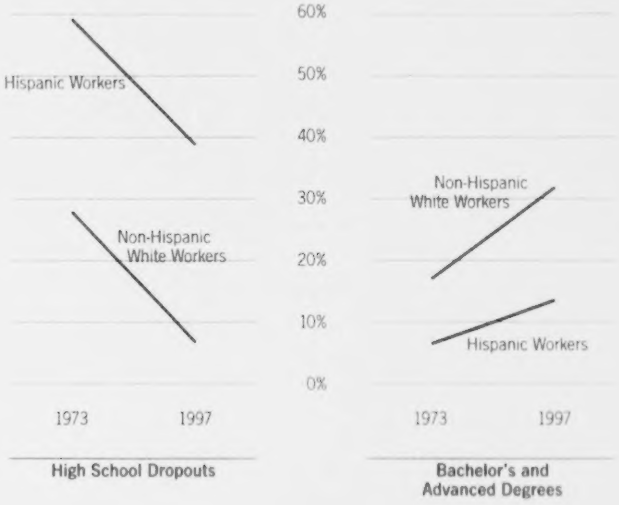
So the lesson is clear—access to the highest-paying occupations and to the highest-paying jobs within each occupation depends increasingly on educational attainment and achievement. And the Hispanic community has responded to the new educational requirements in the job market like everybody else. Since 1973, the proportion of Hispanic high school dropouts has declined and the proportion of Hispanic workers with at least some college, bachelor's degrees, or graduate degrees has increased.

But while this progress is encouraging, Hispanics started out far behind in educational attainment and they remain behind today, due both to a steady influx of adult immigrants with low educational attainment and to the fact that improvements in the Hispanic educational profile have been matched and sometimes exceeded by improvements in the general population *(see Figure 20; see also Tables 1 and 2, Tables A and F in Appendix).*

FIGURE 20

Hispanic Workers Have Increased Their Educational Attainment but Still Trail Non-Hispanic White Workers

Share of prime-age workers who were high school dropouts, or who had earned bachelor's and advanced degrees



ETS analysis of Current Population Survey (March 1974; March 1998).

In other words, Hispanics are running faster in the educational race, but so is everyone else.

While Hispanics have made substantial progress, many have been left behind in American schools or, in the case of adult immigrants, left out of American schools altogether.

While a significant percentage of Hispanics have made substantial educational progress, many have been left behind in American schools or, in the case of adult immigrants, left out of American schools altogether. The upshot is that more than a third of all Hispanics still lack a high school diploma, and fewer than 13 percent have earned bachelor's or graduate degrees—a level 15 percentage points behind the population as a whole.

The Educational Domino Effect

Hispanic educational improvements also have failed to bring commensurate improvements in job prospects because *all* students have had to improve their skills *just to hold their place in the labor market.* These increasing skill requirements in all jobs have had a domino effect in the job queue, as those with more educational attainment bump those with less education in the competition for elite and good jobs.

Between 1959 and 1997, the proportion of the nation's elite managerial and professional jobs that went to applicants with bachelor's degrees increased from 41 to 63 percent. Over the same period, the proportion of elite jobs that went to applicants with some college but no degree increased from only 22 to 23 percent. And, again over the same period, the proportion of elite jobs that went to high school graduates *declined* from 22 to 13 percent, while the proportion of elite jobs that went to dropouts declined from 15 to 1 percent.

The educational ante also went up for good jobs, such as those held by crafts workers, technicians, and clericals. In 1959, more than 57 percent of the men and 30 percent of the women in these jobs were high school dropouts. By 1997, only 11 percent of the men and 5 percent of the women in these jobs had less than a high school diploma. Similarly, in 1959 only 14 percent of the men and 19 percent of the women in these jobs had any college. In 1997, more than half of these workers had at least some amount of college training.

Even in the less-skilled jobs, skill requirements increased. In 1959, three-quarters of the workers in these jobs were dropouts. In 1997, only a quarter were dropouts, half were high school graduates, and a full quarter had at least some college.

Hispanic educational progress hasn't been matched by gains in job prospects—because *all* students have had to improve their skills just to hold their place. We've seen a domino effect in the job queue, as those with more education bump those with less.

The Growing Importance of Nonacademic Skills

So far, we have focused our attention on academic skills. But the economy also requires a whole new set of more general skills, such as leadership, problem solving, and communication. Four reasons account for these new demands:

- Increasing productivity in manufacturing and technical functions means that fewer production workers are needed to produce the same amount of work. As a result, most of the new positions being created are in services, education, health-care, and office jobs–jobs that require more general skills.
- As machines take over much of the repetitive work, workers in all fields spend more time managing technology and working with colleagues and customers. This means that education and training for all jobs, including technical jobs, need to include these more general skills.
- The new, fast-paced, and unforgiving global economy results in constant change in the skills that are required for specific jobs. Economic and technological change also results in less job security. As a result, workers need to

job-hop more—and that means they need more general skills to keep pace with the skill requirements of their current jobs and to adapt more frequently, and more quickly, to the skill requirements of new jobs.

Workers today need to be prepared to job-hop—and that means they need more general skills as well as specific expertise. While these more general skills may be independent of education, educational level is being used as a proxy for measuring them—so Hispanics without higher education are likely to be penalized here as well.

- The global economy has introduced fierce global competition, which means that manufacturers and other businesses are more dependent than ever on general skills that enhance quality, variety, customization, continuous innovation, and customer service.

What are some of these new and more general skills?

- The most basic skill employers seek is the ability of employees to take *responsibility* for the final product or service irrespective of their particular job assignment. The phrase "it's not my job" doesn't cut it in a workplace with a commitment to quality.

- The growing consumer demand for customization and variety requires workers with *problem-solving* skills and *creativity*.[12]

- To continuously improve products and services, institutions require employees up and down the line who have *leadership* and *learning* skills.

- Good customer service requires *interpersonal* and *communication* skills. And in increasingly diverse workplaces and customer markets, especially in diverse global markets, all workers need to *value diversity*.

In one sense, Hispanics are as likely as members of any other racial or ethnic group to have these diverse skills—perhaps even more likely, having grown up learning and using many of these skills to thrive in a country where they are a minority. But some evidence suggests that linguistic, racial, and class bias is limiting the job prospects and incomes of minority workers (Holzer and Ihlanfeldt, 1998; Duster, 1995). In this case, broader problem-solving and interpersonal skills may be more culturally and class-bound than the narrower technical and vocational skills characteristic of the old industrial economy.

And there's another catch. While our ability to teach or assess these general skills is primitive, employers are using educational attainment, especially at college level, as a proxy for measuring them. Because of this, Hispanics *without* a higher education are likely to be penalized, even when they have the skills that are sought.

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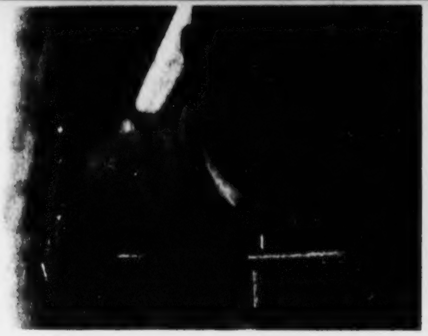
[12] In manufacturing, for example, the shift from long production runs of standardized products to short production runs specialized for individual customers requires workers who can handle exceptions and solve problems creatively. Successful services institutions need workers who have the problem-solving skills and creativity necessary to tailor their offerings to the needs of small groups and individuals.



Skills and the Hispanic Employment Outlook Through 2006

The most comprehensive national data that we have on the skills of adults are supplied by NALS *(see Table 3)*, which identifies five levels of skill:

- **Superior Skills** are typical of high-achieving, college-educated populations.
- **Advanced Skills** are usually exhibited by people with bachelor's or advanced degrees.
- **Competent Skills** are those typically exhibited by people with associate's degrees, postsecondary certificates, or some college but no degree.
- **Basic Skills** are typically demonstrated by average or below-average high school graduates.
- **Minimal Skills** are those usually exhibited by school dropouts.

According to NALS, only 27 percent of Hispanic adults aged 16 to 64 have competent (20 percent) or advanced/superior (7 percent) skills, compared to 68 percent of non-Hispanic Whites *(see Table 4)*. More than a quarter of Hispanic adults (27 percent) have basic skills, while a slightly lower proportion (24 percent) of non-Hispanic White adults have similar skills. Almost half of Hispanic adults (47 percent) have minimal skills, compared to 9 percent of non-Hispanic Whites.

Let's look a little more closely at this breakdown, what it means in terms of employment outlook, and what direction it provides in terms of policy.

The Top 27 Percent: Hispanic Adults With Competent, Advanced, and Superior Skills

The employment outlook for Hispanic adults varies as widely as their skill levels. For the 7 percent of Hispanics with **advanced or superior skills**, there will be numerous job opportunities.

The employment outlook for Hispanic adults varies as widely as their skill levels. For those with advanced or superior skills, there will be numerous job opportunities.

Between 1996 and 2006, some 32 percent of all *new* jobs created—about 6 million—will require applicants with advanced or superior skills (Carnevale and Desrochers, 1999a). The rate of growth of

TABLE 3

Measures of Skill in the National Adult Literacy Survey

Skill Level	Prose	Document	Quantitative
Level 1 *(0-225)* **Minimal Skills** Skills typically exhibited by school dropouts.	Can read short text to locate a single piece of information that is identical to the question. *Examples: Identify a country in a short article; locate 1 piece of information in a sports article.*	Can locate a piece of information based on a literal match between the task and the document or enter personal knowledge onto a document. *Examples: Locate the time of a meeting on a form; use a pie graph to locate the type of vehicle having specific sales.*	Can perform a single, simple arithmetic operation such as addition. The numbers used are provided and the operation to be performed is specified. *Example: Total a bank deposit entry.*
Level 2 *(226-275)* **Basic Skills** Skills typical of average or below average high school graduates.	Can locate a single piece of information when there is distracting information, and can contrast or compare 2 or more pieces of information. *Example: Underline the meaning of a term in a government brochure; interpret instructions from an appliance warranty.*	Can match a single piece of information, with distracting information present, requiring little inference, and can integrate information from several parts of the document. *Examples: Locate an intersection on a street map; enter background information on a social security card application.*	Can perform a single arithmetic operation using numbers that are given in the task or easily located in the material. The arithmetic operation is either described or easily determined from the format of the materials. *Examples: Calculate postage and fees for certified mail; determine the difference in price between tickets for two shows.*
Level 3 *(276-325)* **Competent Skills** Skills typical of people with associate's degrees, postsecondary certificates, or some college but no degree.	Can match information in the text and in the task when low-level inferences are required, integrate information from dense or lengthy text, and generate a response based on information easily identifiable in the text. *Examples: Write a letter explaining an error on a credit card bill; read a news article and identify a sentence that provides interpretation of a situation.*	Can integrate several pieces of information from one or several documents and deal with complex tables or graphs containing information that is irrelevant to the task. *Examples: Enter information into an automobile maintenance form; identify information from a bar graph depicting source of energy and year.*	Can perform tasks where two or more numbers are needed to solve the problem and they must be found in the material. The operation(s) needed can be determined from the arithmetic relation terms used in the question or directive. *Examples: Use a calculator to calculate the difference between the regular and sale price; calculate miles per gallon from information on a mileage record chart.*

TABLE 3 (continued)

Skill Level	Prose	Document	Quantitative
Level 4 *(326-375)* **Advanced Skills** Skills usually exhibited by people with bachelor's or advanced degrees.	Can match text with multiple features, integrate or synthesize information from complex/lengthy passages, and make more complex inferences. *Examples: State in writing an argument made in a lengthy newspaper article; contrast views expressed in two editorials.*	Can perform tasks that require them to draw higher-level inferences and numerous responses without being told how many, and can perform tasks that contain conditional information. *Examples: Use a bus schedule to determine the appropriate bus for a given destination and time; use a table of information to determine the pattern of oil exports across years.*	Can perform two or more operations in sequence or a single operation in which the quantities are found in different types of displays, or the operations must be inferred from the information given or from prior knowledge. *Examples: Determine the correct change using information in a menu; calculate how much a couple would receive from Supplemental Security Income, using an eligibility pamphlet.*
Level 5 *(376-500)* **Superior Skills** Skills typical of high-achieving, college-educated populations.	Can find information in a dense text that has considerable distracting information and can make high-level inferences or use specialized background knowledge. *Examples: Compare the approaches stated in a narrative; summarize two ways lawyers may challenge prospective jurors.*	Can search complex displays that contain several pieces of distracting information, make high-level inferences, and make use of specialized knowledge. *Examples: Use a table to complete a graph, including labeling axes; use a table to compare credit cards and write about the differences between them.*	Can perform multiple operations sequentially, and can also find problems embedded in text or rely on background knowledge to determine the quantities or operations needed. *Examples: Use a calculator to determine the total cost of carpet to cover a room; use information in a news article to calculate the difference in time for completing a race.*

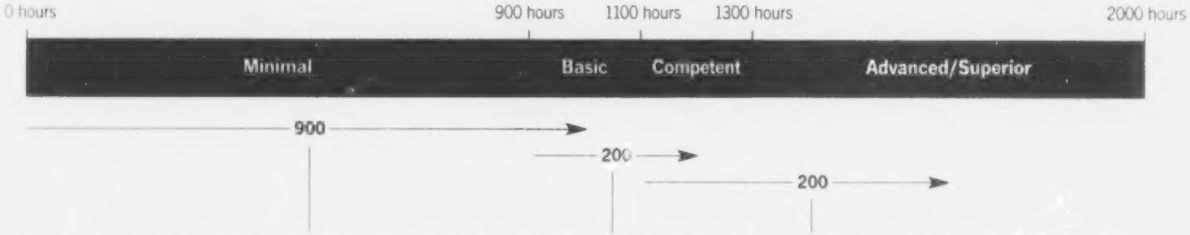
Adapted from Barton and Lapointe (1995)

FIGURE 21

Hispanic Workers' Skills Are Concentrated at Lower Skill Levels, While the Real Growth Is in Higher-Skilled Jobs

Skill Level, Jobs, 1996 Hispanic Annual Earnings	Growing Occupations	Projected Growth % Increase	Projected Growth Net New Jobs	
Level 1: Minimal Skills				
(Dropout)	Hand packers and packagers	23%	222,000	**47% of Hispanic workers** have minimal skills typical of a limited number of occupations expecting moderate growth
12% of jobs in 2006	Groundskeepers, gardeners, and nursery workers	19%	166,000	
1996 earnings: $16,600	Building janitors, cleaners, and maids	4%	135,000	
	Vehicle washers, equipment cleaners	25%	69,000	
Level 2: Basic Skills				
(Below-average H.S. graduate)	Nursing aides, orderlies, and attendants	37%	726,000	**27% of Hispanic workers** have basic skills typical of occupations that are growing somewhat faster
25% of jobs in 2006	Cashiers	17%	530,000	
1996 earnings: $23,200	Cooks	16%	349,000	
	Dental assistants, and health aides	38%	198,000	
Level 3: Competent Skills				
(Some postsecondary)	Health technologists and technicians	38%	524,000	**20% of Hispanic workers** have competent skills typical of fast-growing occupations that tend to require some postsecondary skills
38% of jobs in 2006	Sales workers	10%	408,000	
1996 earnings: $31,800	Teacher aides	38%	370,000	
	Receptionists and information clerks	30%	318,000	
	Guards	20%	249,000	
	Bill and account collectors	42%	112,000	
Level 4: Advanced/Superior Skills *(Bachelor's degree)*	Computer system analysts and scientists	108%	1,004,000	**7% of Hispanic workers** have advanced or superior skills typical of the fastest-growing occupations
26% of jobs in 2006	Registered nurses	21%	411,000	
1996 earnings: $38,400	Teachers, special education	59%	241,000	
	Health therapists	56%	236,000	

Education and Training Hours Needed to Move Through to Each Skill Level



Could take up to 900 hours of education and training for workers with minimal skills to move up to the basic skill level

Could take up to 200 hours of education and training for workers with basic skills to move up to the competent skill level

Could take up to 200 hours of education and training for workers with competent skills to move up to the advanced skill level

ETS analysis of National Adult Literacy Survey (1992), Current Population Survey (March 1997), and Bureau of Labor Statistics Occupational Projections, 1996-2006

TABLE 4

Race/Ethnicity and Prose Skill Levels Among Adults

Skill distribution of the 16- to 64-year-old population

NALS Skill Level	**Level 1** Minimal	**Level 2** Basic	**Level 3** Competent	**Levels 4/5** Advanced/ Superior
Approximate Educational Equivalent	Dropout	Low/Average HS Graduate	Some College	Bachelor's or Higher
	Percent of Population			
Total Population	16.3%	25.9%	34.6%	23.3%
Non-Hispanic White	8.6	23.6	38.8	29.0
African American	33.4	38.9	22.9	4.7
Total Hispanic Population	47.2	26.6	19.8	6.5
Hispanic/Mexicano	51.6	25.8	17.3	5.3
Hispanic/Puerto Rican	45.1	33.7	18.1	3.2
Hispanic/Cuban	48.4	26.6	17.3	7.7
Hispanic/Central, South	39.1	25.1	25.7	10.0
Asian/Pacific Islander	30.6	25.6	28.2	15.5
Other	28.9	36.2	25.9	9.0

ETS analysis of National Adult Literacy Survey (1992).

these jobs—18 percent—is such that, by 2006, 26 percent of *all* jobs will demand advanced or superior skills *(see Figure 21)*. No other category of jobs will grow that fast.

These jobs also pay the highest wages—generally $30,000 to $50,000 for full-time, year-round work. In America today, Hispanic women with advanced or superior skills working year-round average $29,100 in annual earnings and Hispanic men average $42,600 *(see Table 5)*.

While these jobs *require* the most education, they also *provide* the most education, through access to information technology and employer-provided training. Generally 10 to 40 percent of workers in occupations typically employing people with advanced or superior skills receive formal training from their employer, further enhancing their earnings advantages.[13]

The 20 percent of Hispanics with **competent skills** also have a promising employment outlook. Jobs requiring competent skills generally pay $20,000 to $40,000 per year, with Hispanic women averaging $23,700 and Hispanic men averag-

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[13] Workers who receive employer-based training earn 10 to 15 percent more than similar workers who do not get training on the job (Levine, 1996). Workers with access to computer-based technology earn 15 to 25 percent more than similar workers who do not use computers on the job (Krueger, 1993).

TABLE 5

Earnings and Skill Level

Average annual earnings (1996 dollars) of 16- to 64-year-old Hispanic workers employed year-round

NALS Skill Level	**Level 1** Minimal	**Level 2** Basic	**Level 3** Competent	**Levels 4/5** Advanced/ Superior
Approximate Educational Equivalent	Dropout	Low/Average HS Graduate	Some College	Bachelor's or Higher
	Average Annual Earnings			
Hispanic Men	$18,200	$26,700	$37,900	$42,600
Hispanic Women	13,800	18,900	23,700	29,100
All Hispanic Workers	16,600	23,200	31,800	38,400

ETS analysis of National Adult Literacy Survey (1992).

ing $37,900. Over the next decade, jobs in this category will grow by nearly 14 percent, adding 6.8 million new jobs. Between 1996 and 2006, 37 percent of all *new* jobs will require competent skills and, by the end of that period, 38 percent of *total* jobs will do so as well.

More than a third of workers in occupations that usually employ workers with competent skills need training to qualify for their jobs. However, these workers—unlike workers with advanced or superior skills—often obtain their training through *non*academic means. While some jobs do require postsecondary schooling, many only require prior on-the-job training.

The job prospects for Hispanics with competent skills are also good. But for those with basic skills—the middle 27 percent—the future looks less optimistic. And for those with minimal skills—the bottom 47 percent—the employment situation is dire.

The Middle 27 Percent: Hispanic Adults With Basic Skills

The prospects for the middle 27 percent of Hispanics are not nearly so optimistic. These Hispanic adults have **basic skills**, roughly equivalent to high school graduates in the lower half of their class. Jobs employing workers with basic skills usually pay $15,000 to $30,000 a year, with Hispanic women averaging $18,900 and Hispanic men averaging $26,700. Workers in jobs requiring basic skills *need* less prior training to obtain their jobs, but they also have *less access* to formal training on the job. Any retraining they do get is more likely to be informal.

While not growing as fast as jobs requiring advanced/superior or competent skills, jobs employing workers with basic skills are expected to increase by 12 percent between now and 2006. This will add nearly 4 million new jobs in this category, representing 22 percent of all new jobs created and, in 2006, 25 percent of total employment.

The Bottom 47 Percent: Hispanic Adults With Minimal Skills

The 47 percent of Hispanic adults with **minimal skills**—those with skills similar to school dropouts—will face the most dire employment situation. These adults are employable, but only in the least-skilled, lowest-paying jobs, which typically pay $10,000 to $20,000 a year for full-time, year-round work. Hispanic women with minimal skills employed year-round average $13,800 a year and Hispanic men average $18,200.

> **To make matters still worse, job opportunities for workers with minimal skills will grow more slowly than for any other group. In 2006, they will constitute only 12 percent of all jobs.**

To make matters still worse, job opportunities for workers with minimal skills will grow more slowly than for any other group. The number of jobs that require minimal skills is expected to increase by 11 percent between 1996 and 2006, adding 1.8 million new jobs. These constitute only 10 percent of all new jobs that will be created and, in 2006, they will constitute only 12 percent of *all* jobs.

The Policy Implications

So what does all this mean in terms of policy?

In general, for Hispanics with **advanced/superior or competent skills**, there is no one path to the economy's best jobs. They can go after either jobs with a future or more education or training, depending on their individual characteristics and the available jobs. For many of these Hispanics, seeking a job that provides formal or informal training may be their best approach.

For many Hispanics with **competent skills**, however, immediate job placement can represent a lost opportunity to pursue further education, which would in the long run translate into better career prospects and the potential of additional formal and informal training on the job. These Hispanics already tend to have associate's degrees, postsecondary certificates, or some college. For them to move up to jobs requiring advanced skills—*which pay as much as $10,000 more a year*—most would need up to 200 hours (equivalent to a full courseload[14] for one semester) of education and training. They would then

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[14] A full courseload is 5 classes.

For Hispanic workers with basic skills, 200 hours of training—roughly a full courseload for one semester—could raise their earning potential by $5,000-$10,000.

have a more solid set of skills that would better prepare them to pursue a bachelor's degree or jobs that require baccalaureate-level skills.

Thus, while the immediate and short-term benefits of job placement for Hispanics with competent skills are obvious, these benefits need to be balanced against the longer-term benefits of further education. Hispanic workers with advanced/superior skills earn about $6,600 more than those with competent skills.

Hispanics with **basic skills** are faced with a less attractive set of choices. As things stand today, this middle 27 percent are unlikely to get the further education and training they need to obtain better jobs. Despite the growth expected in jobs requiring basic skills, many of these Hispanic workers will end up in dead-end jobs with the least incentives for sustained employment.

What would it take to change this? The least skilled among this group would require up to 200 hours of education or training (roughly a full courseload for one semester) to bring their skills up to the competent level. This would position them to move to jobs that pay $5,000 to $10,000 more than their current earnings potential, and would leave them poised for upward mobility in the labor market. Hispanic workers with competent skills earn, on average, about $8,500 more than Hispanic workers with basic skills.

The 47 percent of Hispanic adults with **minimal skills** face, by far, the most dire employment situation. And improving their job prospects will be difficult. The vast majority of these workers do not have access to jobs with training and a future. Fewer than 10 percent receive any formal or informal retraining on the job. For many of them, one job is no better than the next and there are few incentives for sustained employment.

Access to basic-level jobs could provide Hispanic workers with minimal skills with opportunities to earn $5,000 to $10,000 more. On average, Hispanics with basic skills earn $6,500 more than Hispanics with minimal skills. But increasing the earnings of Hispanic workers with minimal skills could require as much as 900 additional hours of education and training (roughly four and one-half semesters, or more than two years of a full-time courseload) to bring the least skilled of these workers up to the basic skill level. Without substantial investments in education and training, the best strategy for these workers is to rely on family services and income supports that can help them stay on the job while supplementing their earnings.[15]

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[15] Job turnover among low-skilled workers is significantly higher than that of higher-skilled workers. Low-skilled workers are also much more likely to leave work for nonemployment than for another job. Workers with math skills in the lowest quartile are about 15 percent more likely to leave a job in a given week than are those who scored in the highest quartile (Holzer and LaLonde, 1998).

It should be noted that job turnover is not necessarily bad. One voluntary job change a year is associated with about a 3 percent growth in wages. A second voluntary job change or one involuntary job change, however, is related to about a 5 percent loss in wages (Gladden and Taber, 1998).

Hispanic College Participation, 1995-2015

A Closer Look

Let's look more closely at where we are now in terms of Hispanic educational progress, and what we can expect in the future.

Recognizing Achievement

First of all, we should recognize where we have succeeded. Hispanic families and communities already have done a lot for themselves, and we will continue to see the fruits of these efforts as we enter the next century. The Hispanic community knows that education matters. Among Hispanic adults surveyed in California, 78 percent said that a college education is necessary for almost everyone–significantly higher than the 61 percent of non-Hispanic adults who shared that view.

America's public schools have made a difference as well. There has been substantial progress in the education of Hispanics, especially native-born Hispanics and Hispanic immigrants who started school in the United States before the age of 15. The percentage of Hispanic workers with some college grew from 9.2 percent in 1974 to 17.7 percent in 1997 for men, and from 7.5 to 22.2 percent for women. Over the same period, the percentage of Hispanic workers awarded college and graduate degrees grew from 6.6 to 12.4 percent for men and from 6.1 to 15.0 percent for women.

Hispanic families and communities already have done a lot for themselves. The percentage of Hispanic workers with at least some college has doubled since 1974—going from 9.2 to 17.7 percent for men, and from 7.5 to 22.2 percent for women.

Predicting the Next Demographic Wave

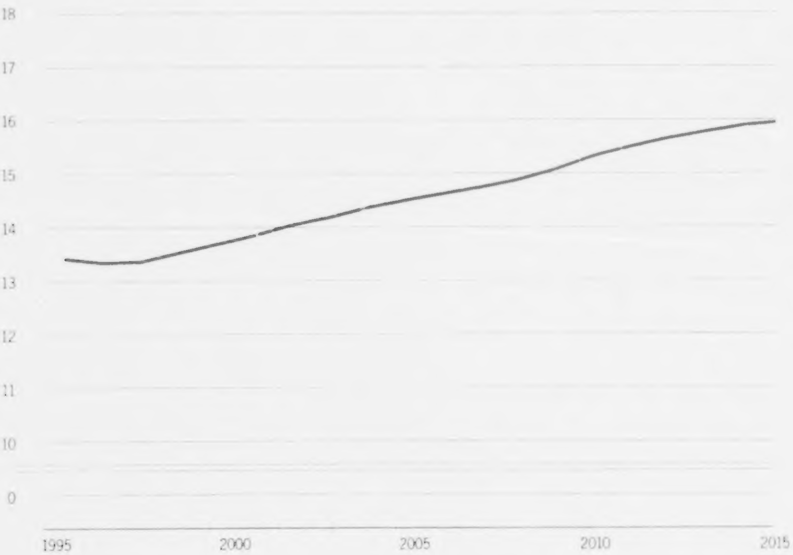
We can also expect some good news for Hispanics in the demography of higher education. America's colleges and universities are beginning to enroll the leading edge of the biggest demographic wave of students since they were flooded by the baby-boom generation in the 1960s (Carnevale and Fry, 1999). This wave of new undergraduates will crest in 2015, when annual undergraduate enrollment–which hovered at more than 13 million in 1995–will peak at 16 million (a 19 percent increase). Compared to the baby boomers, this new wave of students will feature much greater racial and ethnic diversity. The majority will be women *(see Figure 22)*.

Demographics and Educational Opportunity Through 2015...

FIGURE 22

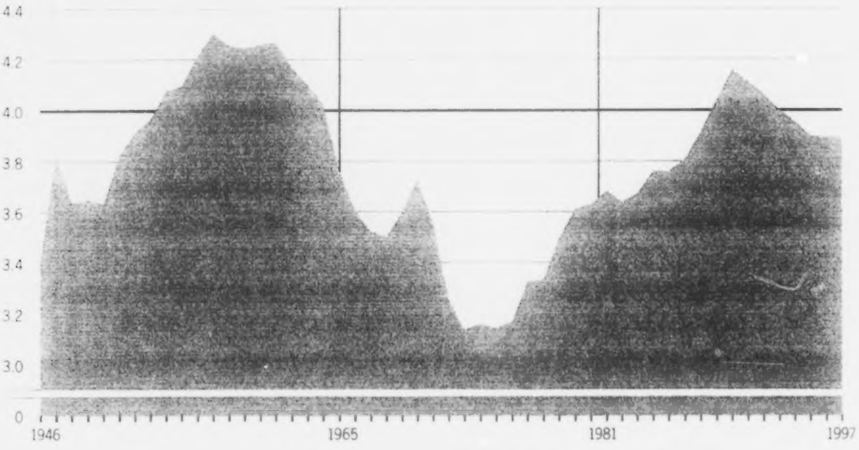
Undergraduate Enrollment Will Expand by 2.6 Million Students...

Millions of undergraduates



...Reflecting the Generation Y "Baby Boom Echo"

Millions of live births



The Baby Boom
Averaged 4.0 million births per year
10 years of 4 million+ births

Generation X
Averaged 3.4 million births per year
0 years of 4 million+ births

Generation Y
Averaged 3.9 million births per year
5 years of 4 million+ births

Source: Carnevale and Fry, 1999.

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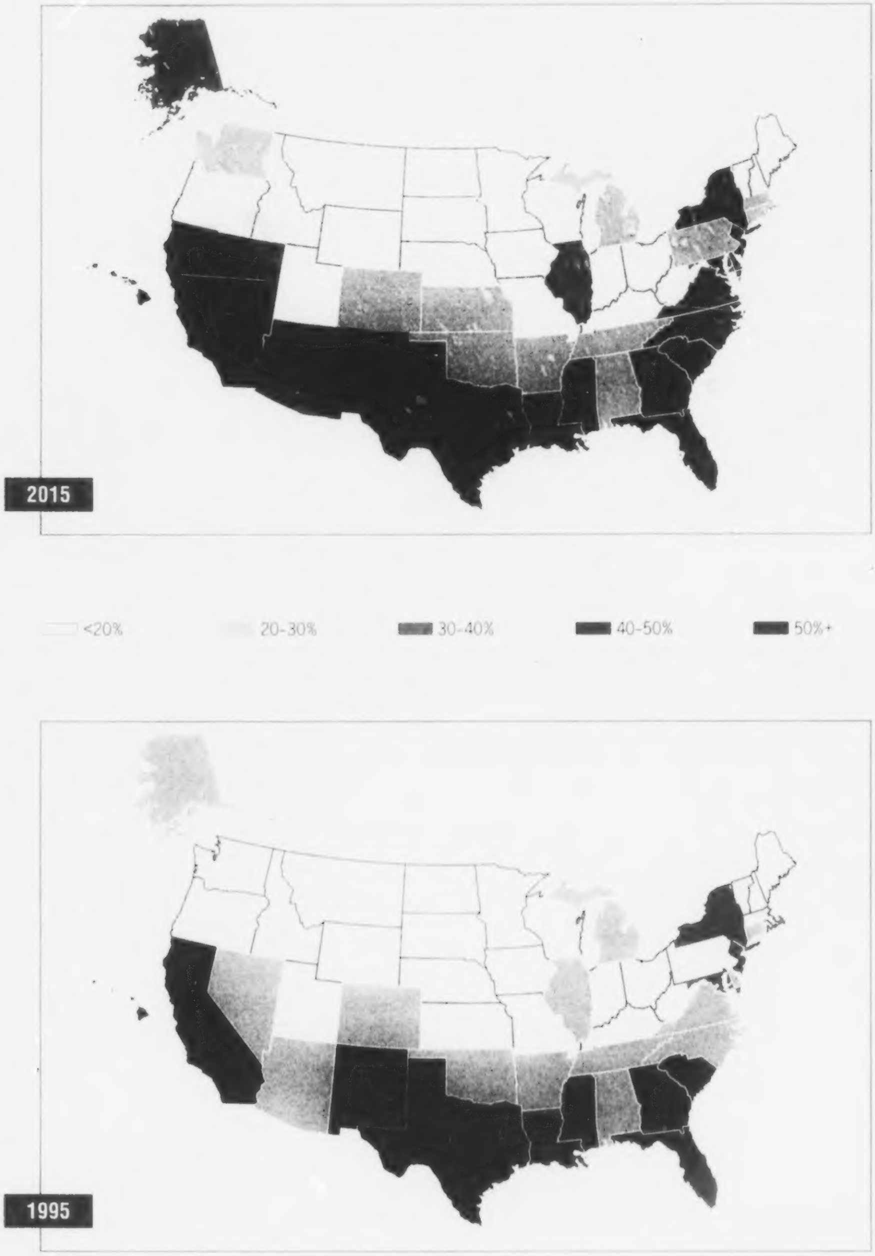
...And Across the Country

FIGURE 23

The Geography of Minority Undergraduates

Percent of racial/ethnic minority undergraduates projected in each state in 1995 and 2015



Source: Carnevale and Fry, 1999.

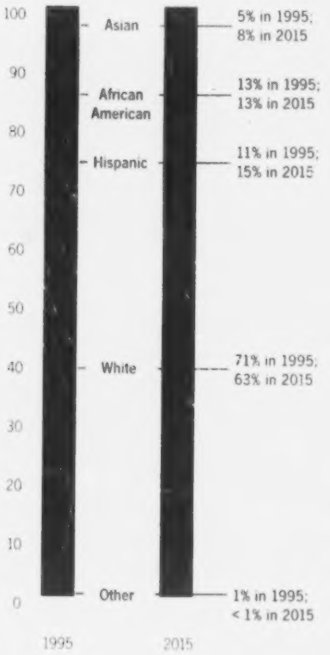
By the year 2015:

- Minority undergraduate enrollments will increase by 2.0 million, while non-Hispanic White enrollments will increase by only 600,000.
- Minority undergraduates will outnumber non-Hispanic Whites in three states—California, Hawaii, New Mexico—and the District of Columbia.
- Sixteen states' minority enrollment will range between 30 and 50 percent—while nationally, 37 percent of all undergraduates will be minority.
- Western colleges and universities—especially California, Texas, Washington, and Arizona—will enroll larger shares of Asian-American and Hispanic students.
- Florida and New York also will experience significant increases in Hispanic students, and New Jersey will enroll a significant number of Asian-American students.
- Southern colleges and universities—especially Georgia, Florida, and North Carolina—will enroll a growing new wave of African-American students.
- Texas and Maryland also will experience significant increases in African-American students.

FIGURE 24

In 2015, Relatively More Undergraduates Will Be Asian, Hispanic and African American

Percent of all students



Source: Carnevale and Fry, 1999.

This new college-age cohort—commonly called "Generation Y" or the "baby-boom echo" because it follows "Generation X" or the "baby bust"—was born between 1982 and 1996. Five basic forces are driving the growth in enrollment from Generation Y: birth rates; steady educational and economic progress; migration; immigration; and increasing participation in higher education among youth and adults *(see Figure 22)*.

The effects of these basic forces are concentrated along the crescent of states that stretch from the Pacific Ocean to the Gulf of Mexico and up the Atlantic coast to New York. States where all five forces converge will have the biggest surge in college enrollments.

More than half of the increased enrollments will be in just five states: California, Texas, Florida, New York, and Arizona (Carnevale and Fry, 1999). Several Midwestern and Northeastern states with large existing undergraduate enrollments, such as Michigan, Ohio, Pennsylvania, and Wisconsin, will experience only modest increases *(see Figure 23)*. States like West Virginia, where the combined effects are weaker, actually will experience enrollment *declines*.

The best news is that these demographic changes, in combination with the increasing educational attainment of minority groups, promise not only that there will be more college students but that American campuses will be more diverse than ever *(see Figure 24)*.

Between 1995 and 2015, the number of non-Hispanic White undergraduates will increase from 9.5 to 10 million, a 6 percent increase. But the actual *share* of non-Hispanic White undergraduates will decline from 70.6 percent in 1995 to 62.8 percent in 2015, because the biggest growth will be among students from racial and ethnic minorities.

For example:

- The number of African-American undergraduates will rise from 1.7 million in 1995 to 2.1 million in 2015, a 23 percent increase.
- Students of Asian-Pacific Islander heritage will almost double in number from 700,000 to 1.3 million, an 86 percent increase.
- The number of Hispanic students will climb from 1.4 to 2.5 million, a 73 percent increase. Hispanic students will outnumber African-American college students for the first time in the year 2006.

Again—Good News and Bad

The good news for America's Hispanic community is that this combination of hard-won educational progress and a surging demographic wave means that Hispanics' share of the college undergraduate population will grow from about 10.5 percent of the 1995 total to nearly 15 percent in 2015. This translates into growing numbers of Hispanics joining the broad American middle class and moving into leadership positions in public and private institutions.

To use these numbers to conclude that our mission is accomplished, however, would be a disastrous mistake. More than half of the new Hispanic enrollees are people over the age of 25. A substantial share of these are part-time students. Older students—and especially part-time students—are the least likely to finish their degrees and will have less time in labor markets to benefit financially from college-level work.

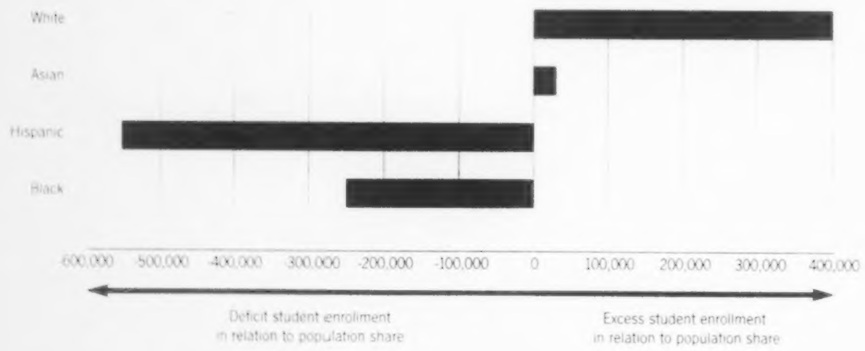
The good news is that the combination of hard-won educational progress and a surging demographic wave means that the Hispanic undergraduate population will grow from about 10.5 percent of the 1995 total to nearly 15 percent in 2015.

Looking just at the younger students, ages 18 to 24, we can predict an increase of more than 500,000 students between 1995 and 2015. Most of this gain, though, is due to the surge in the size of the Hispanic population overall. If the increase in the *numbers* of Hispanics is not accompanied by an increase in the *proportion* of Hispanics who go to college, the differences in college enrollments between 18- to 24-year-old Hispanics and non-Hispanic Whites will actually increase from today's shortfall among Hispanics of 430,000 students to 550,000 students in 2015 *(see Figure 25)*.

FIGURE 25

Ethnicity and Undergraduate Enrollment, 2015

Gap between population share and presence on campus



Source: Carnevale and Fry, 1999.

Identifying the Challenges

Obviously, we still face daunting challenges in increasing Hispanic access to postsecondary education. Let's look at what these are.

Challenge: Graduating more Hispanics from high school

The need to increase Hispanic high school graduation rates is key. Non-Hispanic White and Hispanic high school graduates now differ by only 5 percentage points in college attendance. But this comparison understates differences between the two groups in access to college because many Hispanic students drop out of high school. For instance, the difference in the proportion of Hispanic and non-Hispanic White eighth-graders who eventually go to college is 10 percentage points.

Challenge: Increasing college attendance by students who have the academic ability to continue their education, and increasing retention and graduation among Hispanics in all postsecondary programs

The bad news is that if the increase in the *numbers* of Hispanics is not matched by growth in the *proportion* of Hispanics in college, enrollment differences between 18- to 24-year-old Hispanics and non-Hispanic Whites will actually increase from today's shortfall among Hispanics of 430,000 students to 550,000 students in 2015.

Many Hispanic youth and adults have the capability for college, but don't go. Others who could complete four-year degrees settle for two-year certificates. Many more who could graduate from two-year or four-year schools fall frustratingly short of completion.

The differences in economic outcomes that result from these choices are clear. Those who drop out of high school earn 10 percent less than high school graduates. Those who settle for high school diplomas earn 7 percent less than those who go to college but never get a degree. Those who settle for two-year certificates earn, on average, 21 percent less than students who earn bachelor's degrees. Those with some college credit but no degree earn 22 percent less than four-year graduates.

Challenge: Reaching out to Hispanic students other than the traditional college-age 18- to 24-year-old population, and helping Hispanic students use community colleges as springboards to bachelor's, graduate, or professional degrees

Many current and potential Hispanic college students do not fit the traditional profile of an 18-year-old freshman. They are often older, often parents, often working. For example, more than half of all Hispanics enrolled in undergraduate education are older than 25, compared to 40 percent of all undergraduates.

Moreover, a substantial share of these older students are immigrants who tend to have less educational preparation than either native-born Hispanics or those who immigrated and started in U.S. schools at an early age. Many adult immigrants have basic educational needs–not because they dropped out but because they never dropped in. Among native-born Hispanics, 78 percent had high school diplomas, compared to 47 percent of the foreign-born (most of whom immigrated after the age of 15). Similarly, 47 percent of native-born youth had some college, compared to 23 percent among the foreign-born. And 20 percent of native-born Hispanic young adults had college degrees, compared to 8 percent of those who were foreign-born *(see Table D in Appendix)*.

Postsecondary institutions have a key role to play in this regard. Nontraditional students need academic preparation but they also need help getting from school to work, getting a second chance at education, or keeping up with changing skill requirements on the job. Community colleges and other two-year and four-year colleges are our primary school-to-work, retraining, and second-chance education and training institutions. Adults and other nontraditional students have nowhere else to go to get the education and training they need.

Let's look in more detail at some of the factors involved both in increasing access for traditional 18- to 24-year-olds and in reaching out to nontraditional students.

Increasing Access for Traditional Students

Avoiding Policy Failures

Whether in 2015 we are able to claim more good news than bad will depend at least as much on our own efforts as on those of Hispanic students. Although many of these students will be ready and eager to attend college, shortsighted and unresponsive public policies could fail them.

Students do not pay the full cost of their education. At both two-year and four-year public schools, students pay about $1,200 for a $10,000 education–about 12 percent of the cost. The remaining 88 percent of the cost is borne largely by taxpayers. Of that money, about 70 percent come from states, 22 percent come from the federal government, and 8 percent come from local government.

But the recent history of anemic political support for higher education, especially when budgets are tight and during economic downturns, does not bode well for the nation's colleges and universities.

Whether in 2015 we are able to claim more good news than bad will depend at least as much on our own efforts as on those of Hispanic students. Although many of these students will be ready and eager to attend college, shortsighted and unresponsive public policies could fail them.

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In California, for example—which will experience *a quarter of the total increase in the nation's surge in undergraduates* between now and 2015—the recession of the early 1990s chopped state revenue and fueled tuition and fee increases. Enrollments fell throughout the state's higher education system, from community colleges to the University of California campuses (Callan, 1998).

According to the California Citizens Commission on Higher Education, "Thousands of students were denied educational opportunities, while others were forced to extend their date of graduation. Many stayed enrolled only by assuming greater and greater debt." The result? A "policy vacuum" in response to an educational "emergency," according to the commission.

Since California's mid-1990s recovery from recession, higher education appropriations have risen. But for students who were denied access to a college education and who may never receive a second chance—especially Hispanics, who are more highly concentrated in California than in any other state—that's too little and too late.

In the future, advocates for Hispanic postsecondary access will need to be vigilant to avoid similar policy failures. Increased demand for higher education inevitably results in budgetary pressures. In tight fiscal times, legislatures are tempted to squeeze higher education appropriations because, unlike other public agencies, higher education institutions can shift costs to families by raising tuition and fees.

We need to be sure that students are not held hostage in fiscal struggles between higher education and political leaders, and that the key measure of successful higher education financing policies remains access and the quality of student instruction.

Shifting dollars away from higher education is, thus, seen as a way to encourage efficiencies in the use of available funds. Advocates for increasing college access need to be sure that students are not held hostage in the fiscal struggles between higher education authorities and political leaders, and that the primary measure of successful higher education financing policies remains access and the quality of student instruction.

Underattainment

And what about Hispanic students who appear ready to go to a two-year or a four-year college but don't? This group of underattaining students exists across all races and ethnic groups. Sixty-five percent of high school graduates are "college-qualified"—that is, they meet the minimum academic requirements for admission to a four-year college. But only 45 percent of high school graduates actually *enroll* in four-year schools.

This gap is especially prominent among Hispanic high school graduates. Fifty-three percent of Hispanic high school graduates *could* go to four-year schools; only 31 percent do.

Moreover, *where* students go to college and *how far they get* also are critical issues. A disproportionate share of Hispanics enroll in two-year schools. This would not be a problem except that—as with many first-generation college attendees and nontraditional students—Hispanics are staying at the shallow end of the higher education pool. They are not jumping from two-year schools into four-year institutions and graduate and professional schools.

Half of all Hispanics go to two-year programs, compared to a third of non-Hispanic Whites. Only 27 percent of Hispanics transfer from two-year to four-year schools.

As we have seen, there is a big difference in the earnings potential related to whether a student attains an associate's degree, a bachelor's degree, or a graduate or professional degree. Workers with associate's degrees earn 21 percent more, on average, than workers with only high school diplomas. But the difference is 31 percent for a bachelor's degree, 35 percent for a master's degree, and 63 percent for a professional degree.

To improve Hispanic educational attainment, we need to focus our efforts not just on whether Hispanic students go to college and where they go, but also on whether or not they graduate.

Note that we are now talking about *degrees:* It's not just about whether Hispanics go to college or where they go, it's also about whether or not they graduate. Among students enrolled in four-year colleges, Hispanics have been less likely than non-Hispanic Whites to obtain bachelor's degrees. Of the 1980 high school graduates who enrolled in a four-year college, 44 percent of non-Hispanic White students earned bachelor's degrees by 1986, compared to 20 percent of Hispanics (Ganderton and Santos, 1995).

Several factors apply here. Two-year schools—where Hispanics are most highly concentrated—lose 54 percent of their freshmen, compared to only 29 percent for four-year colleges (Tinto, 1993; *see Table 6*). In addition, more selective institutions have significantly

TABLE 6

First-Year Attrition Among Students

Estimated rates of attrition among all entering students

Institution Type	Four-Year Institutions	Two-Year Institutions
Public	30.0	54.2
Private	25.4	29.6
Total	**28.5**	**49.6**

Adapted from Tinto (1993), Table 2.2, based on ACT Survey (1992)

TABLE 7

Student Attrition Related to Institutional Selectivity

Mean percent of full-time students leaving school within first year

Institutional Selectivity	SAT Score	Attrition
Highly selective	>1100	8.0%
Selective	931-1099	17.5
Traditional	801-930	26.4
Liberal	700-800	32.9
Open	< 700	45.5

Adapted from Tinto (1993), Table 2.3.

lower rates of first-year attrition *(see Table 7)*. Highly selective private colleges have the highest rate of degree completion—at 82 percent, almost twice the rate of open-admission institutions *(see Table 8)*.

One reason for this higher retention rate may be that the more selective colleges have more tutorial services and mentoring programs, and provide a more supportive academic environment than do other colleges. The best institutions help their students overcome college hurdles. And their higher retention rate holds true for students from every racial, ethnic, or gender group.

But—and here's the catch—only a small proportion of Hispanic students (approximately 6 percent) go to the most selective schools.

And it's really a double catch. The same inadequate preparation for college that suppresses Hispanic students' presence at the more selective schools also

TABLE 8

Degree Completion Related to Institutional Selectivity

Percent of 1986 entrants completing degrees at public and private four-year institutions

Institutional Selectivity	SAT Scores	Completion	
		Public	Private
Highly selective	>1100	66.2%	82.3%
Selective	931-1099	52.2	66.3
Traditional	801-930	45.1	55.3
Liberal	700-800	40.1	44.9
Open	<700	38.2	43.1
Total		**46.7**	**57.6**

Adapted from Tinto (1993), Table 2.7.

jeopardizes some students' ability to persist through to graduation at any college they attend. It all goes back to the quality of the education obtained *prior* to college.

Although there are many reasons why students drop out of college, academic preparation is clearly a factor. Retention in college correlates powerfully with measured achievement in high school. Fewer than 10 percent of all college students who score between 440 and 599 on their SATs will graduate. About 30 percent who score in the 600s will graduate, as will almost 50 percent who score in the 800s, 60 percent in the 900s, more than 66 percent in the 1100s, and more than 80 percent of those who score above 1300 *(see Figure 26)*.

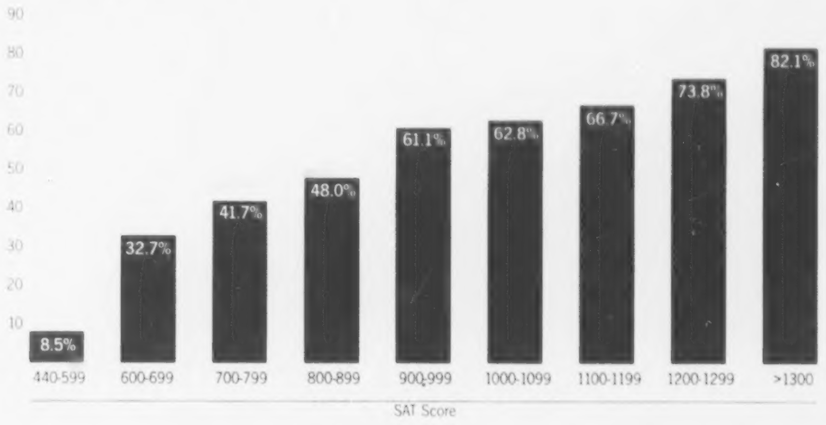
Thus, we must focus our efforts on policies that can help enhance Hispanic students' academic preparation *before* college, both to enable them to compete more successfully for entry to the most selective schools, and to improve their ability to persist through to graduation at other schools as well. And these efforts must be broad-based, looking not just at problems within the schools but at societal and cultural issues as well. We cannot assume that we are doing everything that needs to be done, merely because we can point to increasing numbers of Hispanic students in college.

Although there are many reasons why students drop out of college, academic preparation is clearly a factor. Retention in college correlates powerfully with measured achievement in high school.

FIGURE 26

SAT Performance and Bachelor's Degree Attainment

Percent attaining bachelor's degree



ETS analysis of U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Students Longitudinal Study Second Follow-Up, BPS: 90/94, Public Use Data Analysis System.

Reaching Out to Nontraditional Students

Much of what we've been discussing are issues that affect traditional college students—18- to 24-year-olds who have come through the American education system and are applying to college along with the rest of their age cohort. But it must be underscored that a steady-as-she-goes approach to Hispanic educational and economic progress would be even more harmful to *non*traditional Hispanic college students.

Nearly all of the educational improvements we see among Hispanics come from middle-class, college-bound students who attended American schools. Non-college-bound Hispanic youth, recent immigrants, and Hispanic adults with no college face a difficult time surviving in an economy that has a growing surplus of low-skilled workers.

More than half of all Hispanic students who attend college are over the age of 25. Many are still in college because they weren't ready for college when they came out of high school or because they didn't graduate with their classmates.

Virtually all of the educational improvements we see among Hispanics have come from middle-class, college-bound students who started in American schools and stayed through high school. We see few educational improvements among non-college-bound Hispanic youth or among recent adult immigrants. Nor are we seeing gains among second- or third-generation Hispanic adults who had low high school graduation rates or no college. All of these low-skilled youth and adults are trying to survive in an economy that has a growing surplus of low-skilled workers and declining wages for the least skilled.

The Role of Postsecondary Education in Workforce Development

What does this have to do with postsecondary education? Everything. Although traditional college-bound students are still their priority, postsecondary schools have long since expanded their mission far beyond that (Carnevale and Jacobson, 1998).

Postsecondary education has become our real school-to-work system and our worker training and retraining system. We do not have and are unlikely to build an alternative postsecondary educational track for non-college students. Our egalitarian biases will not allow tracking,[16] and employers are unlikely to expand their training role to emulate the cumbersome European employer-based apprenticeship system, especially at a time when economic requirements require cost reduction and agility.

Thus, the lion's share of workforce preparation and retraining will continue to be done by educators, most effectively in collaboration with employers. Employers actually appear to be our *best* job trainers. Among similarly educated prime-age workers, job training by employers brings the highest earnings returns and the

[16] Tracking is the practice of trying to group students with similarly perceived abilities in the same classes or on similar academic tracks. Still common in Europe and Japan, the idea is that such groupings allow students to progress at similar rates—the "best-prepared" students go faster; the "less-prepared" students go slower. In the United States, "tracking" is seen as both elitist and as suppressing expectations for lower-achieving students.

greatest productivity improvements on the job. Employers, however, will educate and train when they must, but they are unlikely to expand training to students that don't work for them or to their own low-skilled workers.

This is partly because employer training is expensive. In a school classroom, only the teacher gets paid; in an employer-training session, *everyone* is paid.

In addition, over the foreseeable future, employers who do offer training will continue to focus their resources on retraining their own most highly skilled workers, in order to help them keep up with changes in technology and new work processes. Not only is this retraining most essential to an employer's ability to compete in the global economy, but it provides the greatest economic return. It will, thus, be the top-priority use of money available for training.

And it will be expensive. By 2005, as managerial, technical, and professional workers become a larger share of the workforce, employers will have to spend an additional $15 billion each year—or $78.4 billion in all—just to maintain *current* training levels among their most highly skilled workers (Carnevale and Desrochers, 1999b).

We can already see the changes happening. Today, there isn't much on-the-job training except in jobs that require at least some college. The proportion of college-educated workers (21 percent) that get training from their employers is twice that of workers with high school or less (10.9 percent) who receive similar training.

Clearly, the era when a person could start out on the loading dock and end up in the corner office is over. Consequently, unless postsecondary schools educate and train nontraditional students and low-skilled adults, those students will have no place to go. Nowadays, it's the education people get *before* going to work that counts the most. While they can still make progress by learning on the job, they have to *get* the job first. And people with the least education are unable to get jobs that provide learning or access to technology.

This new reality is especially troublesome for the least skilled, including the educationally disadvantaged, dislocated workers, and welfare mothers. These populations are *most* in need of a second chance at education and training and they have the fewest options for obtaining it. Without access to remediation and skill enhancement in two-year and four-year colleges, the disadvantaged and dislocated are doomed to trade unemployment for underemployment, and move only from welfare traps to poverty traps.

Unless our higher education system offers training to nontraditional students and low-skilled adults, those students will have no place to go. Nowadays, it's the education people get *before* going to work that counts. While they can progress by learning on the job, they have to *get* the job first.

> **The real successes in the second-chance system usually come when people use the first-chance higher education system. But social welfare and public training agencies, which are rapidly getting out of the education and training business, are now unlikely to encourage their clients to enroll in postsecondary schools.**

The key lesson we have learned from our experience with the "second-chance" education and training system—from Manpower Development Training Act in the 1960s to the Job Training Partnership Act (JTPA) in the 1990s—is that it is the *first* chance that counts. The real successes in the second-chance system usually come when people use the first-chance postsecondary education system. Employment and training programs that show positive earnings returns are usually those that enable enrollment in two-year, four-year, and proprietary postsecondary institutions.

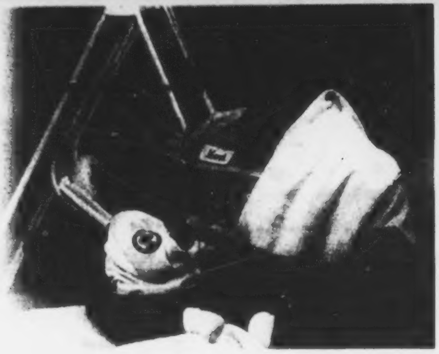
Through evaluating what worked and what didn't, public job trainers have learned to rely on postsecondary teachers and trainers. For instance, more than 357,400 welfare mothers and 119,400 of their dependent children used Pell Grants, as did 75,000 dislocated workers, 48 percent of whom also got student loans (Carnevale and Jacobson, 1998).

The Barriers to Postsecondary Education Access

Unfortunately, a number of disturbing trends militate against increasing nontraditional students' access to postsecondary institutions. Among higher education policymakers, there is persistent unease about further extending Pell Grants and student loans, due to high loan default rates and fly-by-night education and training institutions created to cash in on Pell Grants and loan revenues. The poor-quality curricula that such institutions offer exploit not only the programs developed to help the disadvantaged, but the disadvantaged themselves.

Another factor that is likely to make higher education institutions shy away from nontraditional students is the arrival of Generation Y. With the influx of *traditional* 18- to 24-year-old students, institutions will have both less incentive and fewer resources to offer the flexible schedules and accommodations for job and family obligations that are required by *non*traditional students.

To make matters worse, social welfare and public training agencies, which are rapidly getting out of the education and training business, are now unlikely to encourage their clients to enroll in accredited postsecondary schools. Workforce training and social welfare policy have shifted from a "train-first" approach to a "work-first" approach, essentially abandoning education and training as an initial strategy for advancing opportunity for disadvantaged and dislocated workers.



Policy Priorities

So what is to be done? What can we do to increase college attendance and graduation among Hispanic students?

There are four answers–the silver bullets–that are most often discussed: money, affirmative action, testing, and bilingual education.

Money Matters

When it comes to paying for college, having money obviously helps. All things being equal, middle-class or wealthy families have an easier time putting their children through college than do low-income or poor families. In the past, financial aid programs–from the GI Bill on to Pell Grants–have helped overcome some of this imbalance.

Current aid levels, however, no longer appear to be increasing participation rates among low-income students (Kane, 1995; Hansen, 1984). One obvious reason for this is that college costs are rising faster than college aid. Federal student assistance and loans are being used to *substitute* for state aid, rather than increasing the total amount of aid available (Turner, 1998). The fact that a growing share of aid comes in the form of loans makes things still worse, since the neediest students come from families with little discretionary income, who may be reluctant (with good reason) to exacerbate debt (Nora and Horvath, 1989).

College costs are rising faster than college aid. And the fact that a growing share of aid comes in the form of loans makes things still worse, since the neediest students come from families with little discretionary income, who may be reluctant — with good reason—to exacerbate debt.

One study, for example, found that a $1,000 increase in public two-year tuition led to a 6 percent drop in undergraduate enrollment, with the effect concentrated among low-income youth (Kane, 1995).

Therefore, financial aid is indeed critical for low-income families. Because Hispanic families' earnings are lower, on average, than those of other major population groups, Hispanics rely on student aid more than non-Hispanic Whites.

In addition, financial aid also may have positive *non*financial effects on the educational attainment of Hispanics and other minorities. It validates their worthiness as students and as members of the college community (Nora and Horvath, 1989).

But we *shouldn't overstate money's importance or assume it can cure all ills.* The costs to students at public institutions remain highly subsidized. Undergraduate students in financial need have access to $3,000 in Pell Grants awards and $7,000 in loans every year. The average two-year student who gets federal aid receives $2,600 each year, while tuition and fees in two-year schools average $1,300 a year. The average four-year, public-college student who gets federal aid receives $4,900 a year; tuition and fees at four-year public colleges average $3,000 a year (NCES, 1997b).

Students will continue to need financial help. But Hispanic students—and especially nontraditional students—also need supportive academic and social services.

Thus, for traditional 18- to 24-year-old college students, who can generally live quite inexpensively, Pell Grants and educational loans can help make college affordable. That is not to say that these students—especially low-income students—won't continue to need financial help. *But they also need supportive academic and social services.* The effects of financial aid on college attendance among low-income and minority students have been disappointing (Kane, 1995). A combination of financial aid and supportive services offers more promise. Enrollment, persistence through graduation, and the quality of learning—especially for first-generation Hispanic college students—could be significantly enhanced by new *forms* of aid designed to provide direct services such as enrichment programs (tutoring, seminars, workshops, mentoring programs, etc.), social support, counseling, and help with college planning.

The needs of *non*traditional students require even more creativity. Adult students with families need more financial help than is usually available if they are going to be able to simultaneously pay for school *and* support children. We have yet to devise effective financial packages for students who need assistance both to cover college costs and to support their families.

But opening the school doors to students with work and family commitments is as much about time as it is about money. New forms of assistance such as child-care programs and more flexible offerings that allow nontraditional students to integrate schooling, work, and family are as much a challenge for postsecondary schools as making lifelong learning financially affordable. Here technology solutions, such as innovations associated with cable, satellite technology, the Internet, and the virtual university, are probably fruitful possibilities to improve access.

Affirmative Action and Beyond

The second often-discussed route to increase minority access to college is affirmative action. Since President Kennedy issued Executive Order 11246 in 1961, affirmative action has served us well, providing minority students with pathways to the professions, the professorate, and leadership positions in every walk of American life. The success stories that can be credited to affirmative action have had a reverberating effect, providing role models and tangible demonstrations of achievement that have been among our strongest weapons against discrimination and low expectations.

Affirmative action policies remain important for access to the most selective colleges and graduate and professional schools. Presently, even *with* affirmative action, Hispanics still don't get their fair share of the seats in the top colleges. For instance, there are currently about 7,500 Hispanics in the freshman classes at the nation's 120 most selective colleges and universities—the 48 most competitive and 72 highly competitive colleges and universities *(see Tables G and H in Appendix)*. For that number to be proportionate to Hispanics' share of the 18- to 24-year-old population, it would have to increase by at least 10,000.

Without affirmative action, we could expect that the current number of Hispanic freshmen at elite schools would be closer to 3,500, and would have to grow *by more than 14,000* to match Hispanics' demographic share of the 18- to 24-year-old population.

It also should be noted that affirmative action, as practiced in the nation's most selective colleges, *affects relatively few Hispanics directly but affects all Hispanics indirectly.* Highly qualified Hispanics denied admission at any one selective school are likely to be admitted to another, and are more than qualified for admission to the vast majority of postsecondary institutions. However, assessing the impact of affirmative action only on the few Hispanics who go to the most selective schools ignores the broader effects.

Affirmative action in the most selective schools negates the often subtle and sometimes blatant amalgam of social, economic, and cultural forces that deny Hispanic and other minorities access not just to the most selective institutions but, ultimately, to leadership positions in the society at large. Affirmative action frustrates the constant reproduction of majority elites and validates the possibility for upward mobility among Hispanics, providing individual role models of academic and career success at the highest levels of American academic, cultural, political, and economic institutions.

Affirmative action has served us well and remains important. But even *with* affirmative action, Hispanics still don't get their fair share of the seats in the top colleges. And it has almost no impact on attendance beyond the 120 most selective schools.

Even so, the importance of affirmative action should not be overstated either.

Purely from a numbers standpoint, affirmative action primarily improves minority access to elite undergraduate programs and to graduate and professional schools. These schools are a relatively small part of the education pie. The vast majority of students, including minority students, will go elsewhere.

The 120 most selective colleges—those that admit fewer than half of their applicants—represent only 7 percent of all four-year schools and only 4 percent of all two-year and four-year institutions. There are about 24,000 Hispanics in the nation's most selective 120 four-year colleges and universities.

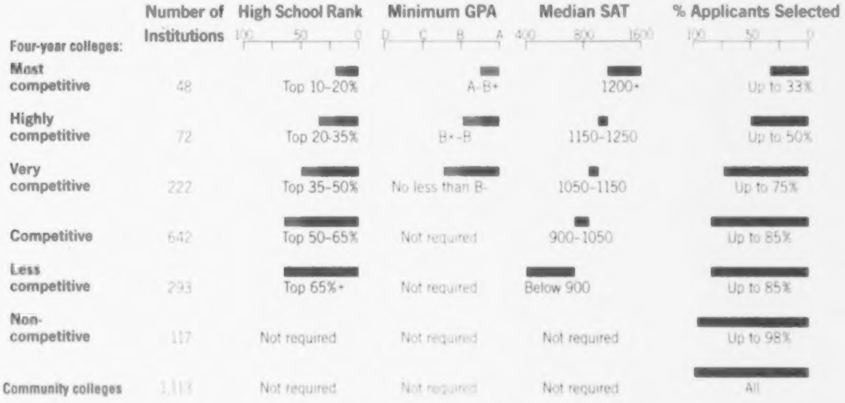
By contrast, there are more than 1,400,000 Hispanics in all two-year and four-year postsecondary institutions—half between the ages of 18 and 24 and half over the age of 25. Even a 10 percent increase in these enrollments would add an additional 140,000 Hispanic students in higher education, a number greater than the enrollments of all undergraduate students in the most selective schools.

Moreover, at these less selective schools, virtually any high school graduate who wants to attend college can do so. About 864 four-year institutions admit between 50 and 85 percent of their applicants. About 410 four-year schools admit 85 to 98 percent of their applicants. Another 414 four-year schools have "open door" policies. And all of the nation's two-year schools are open to all comers, even students without high school diplomas when they have a demonstrated "ability to benefit" (Carnevale, Haghighat, and Kimmel, 1999) *(see Figure 27; see also Tables G & H in Appendix).*

There are about 24,000 Hispanics in the most selective 120 colleges—compared to more than 1.4 million in the remaining schools. Just a 10 percent increase would mean 140,000 new Hispanic students in college—but our policies ignore these schools.

FIGURE 27

Selectivity Among Higher Education Institutions



Four-year colleges:	Number of Institutions	High School Rank	Minimum GPA	Median SAT	% Applicants Selected
Most competitive	48	Top 10–20%	A–B+	1200+	Up to 33%
Highly competitive	72	Top 20-35%	B+–B	1150–1250	Up to 50%
Very competitive	222	Top 35–50%	No less than B-	1050–1150	Up to 75%
Competitive	642	Top 50–65%	Not required	900–1050	Up to 85%
Less competitive	293	Top 65%+	Not required	Below 900	Up to 85%
Non-competitive	117	Not required	Not required	Not required	Up to 98%
Community colleges	1,113	Not required	Not required	Not required	All

Adapted from Nettles, et al. (1997) and Phillippe (1997).

Hispanics and African Americans have roughly equal shares in the most selective 120 colleges and the "very competitive" 222 colleges and universities, but have less access to these schools than non-Hispanic Whites and Asians *(see Figure 28; see also Tables G and H in Appendix)*. But in the remaining 1,400 four-year schools that are "competitive," "less competitive," "non-competitive" or other schools, Hispanics are much less well-represented.

As a result, only 51 percent of Hispanics are in four-year schools, compared with 68 percent of Asians, 67 percent of non-Hispanic Whites, and 68 percent of African Americans. The remaining 49 percent of Hispanic college students are in two-year schools, compared with 32 percent of Asians, 33 percent of non-Hispanic Whites, and 36 percent of African Americans.

Affirmative Action, the Most Selective Schools, and Employment Options

In the public dialogue, an overemphasis on affirmative action policies in the most selective schools thus ignores the needs of the broader student population. It also sends the wrong message, implying that good jobs come only to those who attend the most selective schools.

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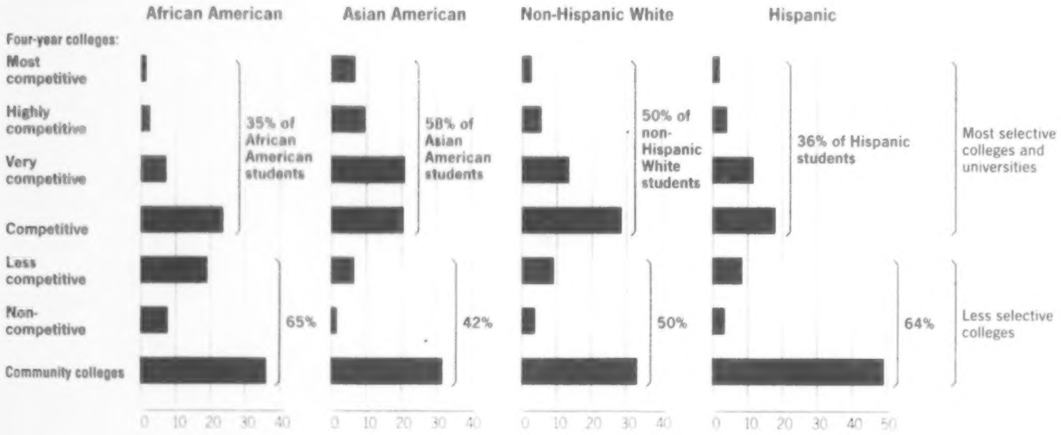
The American economy creates many more good job opportunities than there are students from the most selective schools to fill them. Let's look at the numbers.

FIGURE 28

A High Proportion of Hispanic Students Enroll in Less Selective Colleges

Percent of Race/Ethnic Group



Adapted from Nettles, et al. (1997) and Phillippe (1997).

We need to engage in some affirmative *outreach*, driving home to students the fact that while some colleges may be better than others, *any* college is better than no college—and *many* colleges offer them a path to success.

Every year, about 133,000 students enter the nation's 120 most selective schools. Every year, about 100,000 of them graduate. Add even another 100,000 graduates from the most selective graduate and professional schools, and there are still no more than 200,000 graduates of the most selective institutions entering the labor market each year.

But every year, the economy creates about 1 *million* new managerial and professional jobs and another 1 million or so good jobs that hire people with at least some college. Even if *every* graduate from a most selective school took one of those elite managerial and professional jobs (which they don't), that would still leave 900,000 elite managerial and professional jobs and another 1 million good jobs—a total of about 1.9 million college-level jobs—for the 1.7 million newly minted graduates from other four-year and two-year institutions.

Prospective college students need to understand that, in terms of their eventual earnings, the occupations they choose matter a lot more than the college they attend. For instance, schoolteachers who go to the most selective schools aren't going to make any more than teachers who go to less selective colleges. The earnings are attached to the occupations, not to the colleges. (Carnevale, Fry, and Rose, 1999).

We—policymakers, university administrators, other educators, and the public—need to understand that prospective college students aren't going to pick up this information on their own. We need to engage in some **affirmative outreach**, driving home to students the fact that while some colleges may be better than others, *any* college is better than no college—and *many* colleges offer them a path to success. Without such education and affirmative outreach programs that actively recruit minority students to schools beyond the most selective, success will continue to elude us in our efforts to significantly increase Hispanic college enrollment and graduation.

Broadening Our Affirmative Approach

Our approach in this country to affirmative action policies has limited our focus not just to the most selective schools but to a very narrow age range—high school students as they approach college. This narrow approach has concentrated all our hopes for equalizing educational opportunity—and all the political pressures as well—at the door of college admissions, and has ignored the entire educational pipeline that precedes that point. We *must* broaden our focus.

We need to pay attention to the entire K-16 pipeline. In other words, we need **affirmative development**, not just affirmative action. Unless our policies work to improve academic preparation from kindergarten on, the least-advantaged Hispanic students will not be ready for college, and others will face a difficult struggle making it through to college graduation.

Reinventing Assessment

Standardized testing has become a matter of some controversy in the debate over minority access to college. But those who swear by testing and those who swear *at* it both need to remember that tests matter most in admissions to the most selective schools. As previously noted, these most selective schools are a critical but fairly small piece of the higher education pie (Carnevale and Kimmel, 1999).

A complete discussion of tests is outside the scope of this study. But several important points should be noted. First, tests by themselves should *never* be a final barrier to college admissions, because they never should be used as the sole criterion for admission. Tests—while among our most powerful predictors of future learning and earning success—still measure only part of what matters for success in college and subsequent careers.

Tests by themselves should never be a final barrier to college, because they should never be used as the sole criterion for admission. Used the right way, tests are gate-openers more than gatekeepers.

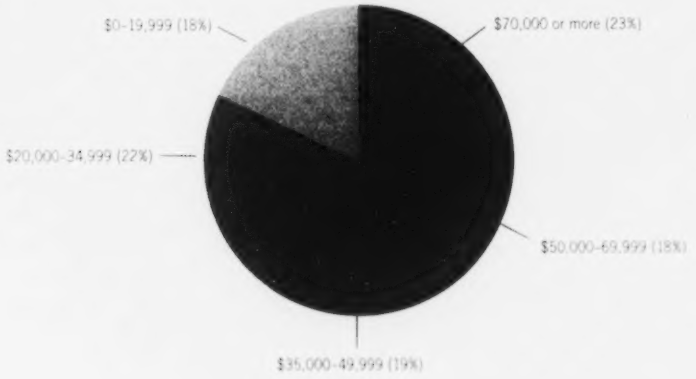
Second, tests play a much smaller role in admissions decisions at the vast majority of four-year schools than they do at the most selective 120 four-year schools, and they play almost no role at two-year schools. For example, it generally takes an SAT score greater than 1200, achieved by about 20 percent of SAT-takers, to get into the most selective schools—but admission to the next tier of more than 860 "selective" schools tends to require an SAT score above 900, which is achieved by about two-thirds of SAT-takers. In the almost 300 "less selective" schools, an SAT score above 600, achieved by 98 percent of SAT-takers, is generally required. Among the more than 530 "non-selective" four-year schools and the more than 1,100 two-year schools, neither test scores nor grades are a factor in admissions.

In fact, tests are gate-openers more often than gatekeepers. Tests help colleges identify high-achieving students regardless of their background. In 1997, for instance, almost half a million students scored above 1000 on the SAT—a score that correlates with a better than 60 percent chance of obtaining a college degree. Sixty-three percent of those students were from families that made less than $70,000 a year. These aren't poor kids—but neither are they rich. The average income in the United States for families with children and two working parents is $71,000. The average income among *all* American families is $55,000 (U.S. Bureau of the Census, 1997).

FIGURE 29

Hispanic/Latino Family Income and SAT Scores

Percent in each income group of all 26,285 Hispanic/Latino SAT-takers who scored 1000 or more



ETS SAT Student Data Questionnaire database (1992)

The "should we or shouldn't we pay attention to test scores?" debate has diverted attention from more critical questions. Such as: What kinds of tests would best serve to advance student learning, teaching excellence, and our nation's efforts to ensure both educational quality and equality?

Among the 26,285 Hispanic SAT-takers who scored 1000 or more in 1997, more than half came from families with annual incomes less than $50,000. Forty percent came from lower middle-class and working poor families making less than $35,000 a year. And 18 percent came from even poorer families with incomes less than $20,000 per year *(see Figure 29)*.

Thus, there are a large number of lower middle-class and poor students who can only be helped by testing. And there are a large number of wealthier students who would probably like to see testing disappear. High test scores can't be bought, and a lot of rich youngsters don't do all that well on the SAT. The median test score among students in the nation's most selective 120 colleges is 1250 or more; fewer than a third of students from families earning more than $70,000 a year score that high (Nettles, Perna, and Edelin, 1997).

Third, the "should we or shouldn't we pay attention to test scores?" debate has diverted attention from what may be more critical questions. Such as: How do we devise tests that tell us more about what we really need to know, and that give us a better idea of how we are equipping our youth to succeed not only in college but in life after college? What kinds of tests would better advance student learning, teaching excellence, and our nation's efforts to ensure both educational quality and equality?

Ultimately, better assessments are integral to educational improvements for all students, including Hispanics. We can't have educational excellence without standards. And we can't know if we are meeting our standards without tests.

Today, the new standard is global. The children in San Diego will eventually be competing for jobs with their counterparts in Boston, Paris, and Tokyo. Our new motto might well become: Educate locally; assess nationally and globally. Unfortunately, our current testing system doesn't tell parents, students, or teachers enough about how individual students compare nationally *or* globally.

But we also need to use test results to measure *more* than just individual student success. Tests are good indicators of individual success—but they are even better indicators of our *collective* success or failure in providing an equal opportunity to learn and earn. We need to use tests not just to point out where individual students need to improve, but where our education system itself is weak.

Today, the new standard is global. San Diego children will end up competing for jobs with their counterparts in Boston, Paris, and Tokyo. Our new motto might well become: Educate locally; assess nationally and globally.

Our goal should be tests that are truly part of the educational process. Tests that are authentic and diagnostic—tests that tell students, their parents, and their schools where the students are in their educational development, and what they need to learn in order to get where they want to go in their schooling and careers. Tests that teach educators what works and what they need to keep doing, start doing, or stop doing to support their students. And tests that tell the nation where we are meeting our goals and where we are falling short.

In short, we need to use tests, and test results, as indicators that hold us accountable for providing equal, and optimal, opportunity to learn.

But using tests for accountability's sake will not be enough. We need a unified effort engaging political leaders, business leaders, parents, and educators alike—and especially teachers. Without that type of cooperative partnership, we won't get very far. Ultimately, we need tests that improve teaching and learning—tests that are aligned with curricula, performance standards, and teacher preparation.

Supporting Bilingual Education

Like testing, bilingual education has spurred considerable debate over whether we need more or less of it and which kind is best. We can start, however, with the areas of agreement.

The most disturbing aspect of the highly politicized dialogue on bilingual education is the implicit, and recurring, assumption that the needs of students who might benefit from some form of bilingual education are all the same.

Virtually everyone agrees that mastery of English is important for success in the U.S. workforce and, increasingly, in the global marketplace. At every education level, workers who speak fluent English will earn 15 percent more than those who don't.

The good news is that native-born Hispanics, like other native-born Americans, speak English quite well. For example, only 4 percent of native-born Mexican Americans between the ages of 13 and 17 speak English poorly or not at all (Carliner, 1995).

What characteristics contribute to this success? According to NALS, Hispanic youth—ages 16 to 25—raised in English-speaking or bilingual English-Spanish households have significantly higher prose literacy skills (measured in English) than those raised in Spanish-speaking households. About half of the youth raised in English-speaking or bilingual households demonstrate college-level skills, while only 7 percent of those raised in Spanish-only households perform at that level.

But this simple correlation between language spoken in the home and educational performance is a superficial indicator of educational potential and performance. The more fundamental causes of educational performance among Hispanics—access to quality education, residential location, parental education, and other pre- and post-immigration characteristics—are much more complex (Espensfade and Fu, 1997).

This brings us to what is the most disturbing aspect of the highly politicized dialogue on bilingual education—the implicit, and recurring, assumption that the needs of students who might benefit from some form of bilingual education are all the same. Given the diversity of languages and cultures represented by students with limited English, it stands to reason that each of the different approaches will work *some*where, *some* of the time, but that no one approach will work *every*where, *every* time.

In the final analysis, the success of bilingual and language immersion programs depends on providing a variety of approaches, customized to the developmental needs of individual students. Moreover, while the jury is still out on which models of bilingual education work best for which students, ultimately—in the words of Maria Estela Brisk (1998), author of *Bilingual Education: From Compensatory to Quality Schooling*—"[W]e need to go beyond the debate on language choice and support for particular models . . . The focus needs to shift from language to schools . . . Schools, not languages, educate students."

A Strategy of Engagement

So let's review. We can help educational institutions succeed with Hispanic students by aggressively and creatively addressing our policy problems, and sometimes by shifting the parameters of the debate:

- More financial—and especially non-loan—aid is necessary for low-income students. But we also need to focus attention on new *forms* of assistance to address some of the *non*financial obstacles that stand in our path. We need targeted educational and social support services—everything from tutoring and mentoring programs to improve the academic readiness of traditional students to child care and Internet-based education programs to address the multiple demands on *non*traditional students.

- Affirmative action policies are necessary in some form to ensure Hispanic access to the most selective colleges and to graduate and professional schools. But we also need to broaden affirmative action by looking beyond the current narrow focus on college admissions, to address even more fundamental questions of readiness for college and persistence through graduation. We must add affirmative development strategies that examine the entire K-16 educational pipeline, and focus on increasing Hispanic students' academic preparation *prior* to college. And we must add affirmative outreach strategies as well—strategies that can bring Hispanic students in greater numbers to the vast number of postsecondary institutions beyond the most selective schools.

- We need to develop tests that not only assess where individual students are in their educational development, but that help them know where to focus their efforts in order to improve. We also need tests that measure not just our students' achievements, but tell us how well our education system is succeeding in providing students with equal opportunities to learn. Tests must, thus, be aligned with both instructional strategies and performance standards, and both students and teachers must be enabled to use tests as diagnostic tools.

- Bilingual education, after its recent battering in the culture wars, needs to be salvaged and rebuilt. Our policies must recognize that, given the diversity of non-English-speaking students, there is no one "right" style of bilingual education. Our policies also must recognize that, given the way the world is heading, fewer and fewer Americans can afford to remain *mono*lingual. While mas-

To empower Hispanic students, we need aggressive and creative policy approaches. In some cases that means shifting the parameters of the debate.

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tery of English has become critical to success in today's world, in the Western Hemisphere, mastery of Spanish is equally essential for many workers. We need to stop treating bilingual education as a form of remedial training and start focusing on how we can best help students—all students—navigate in multiple languages.

These top-down policy decisions regarding financial aid, affirmative action, testing, and bilingual education, however, need to be balanced with a strategy of engagement that moves from the bottom up. Top-down policies can remove financial and other barriers, and create navigable paths toward college enrollment and graduation. But they need to be matched by a bottom-up push that can only come from engaging individual Hispanic students, families, social institutions, and communities.

This bottom-up mobilization is even more challenging, since it's not something that can be enacted with a few strokes of a governor's or a president's pen. If we can make progress on these more difficult fronts, the effects will be powerful and lasting.

Top-down policies can remove financial and other barriers. But they need to be matched by a bottom-up push that can only come from engaging individual Hispanic students, families, social institutions, and communities.

Enhancing Social Capital

Top-down strategies focus on our political and economic assets. Bottom-up strategies take advantage of our cultural assets as well. We need to marshal our *social capital*—the capacity of families and social institutions like churches and schools to build the self-esteem of children—to strengthen our collective *human capital,* the sum total of individuals' knowledge and skills.

James Coleman's (1987; 1988) concept of "social capital" includes relationships between and among children, parents, the neighborhood, and the community. Social capital wields its power through norms, social networks, and relationships between adults and children.

More specifically, social capital reflects the capacity of families and social institutions to "invest" in children—by showing interest, by defining and imparting values, by advising, and by caring for children. An adult presence is important, but even more important are parent-child relationships and inter-generational communications reflected in activities such as reading to children, helping them with homework, listening to their problems and applauding their successes, and generally helping them to overcome everyday challenges.

Social capital in schools is indicated by a high degree of involvement and interconnectedness between students, parents, and teachers. Teachers and parents, in particular, have a joint interest in the well-being of the students; they operate as functional communities. Similarly cultural, ethnic, and youth organizations such as ASPIRA, National Council of La Raza, Boy Scouts of America, Girl Scouts of America, Head Start, and many more can enhance social capital.

Numerous studies attest to the power of social capital. Certain parenting practices–such as frequent and positive parent-child interactions and maintaining close child supervision–are associated with high achievement in children (Becher, 1984; Muller and Kerbow, 1993). Communication between school faculties and families, such as meetings and conferences, correlates positively with standardized math and reading test scores and with grade point average (Phillips, 1992). Several studies also have found a positive relationship between parent attendance at a school meeting or event and student achievement (Comer, 1988; Land, 1983; Leler, 1983).

In addition to their involvement with the schools, parental assistance and involvement in learning activities at home has a significant effect on children's achievement, attendance, and classroom behavior (Bloom, 1986; Comer, 1980; Gotts, 1980). Muller and Kerbow (1993) found that parent-child discussions about current school experiences were a significant predictor of student achievement. They also showed that parents' actions in the home were strongly associated with test scores, while parent relations with the school primarily influenced their child's grades. Other researchers found that more frequent discussions of school between parents and children were associated with higher test scores (Herman and Yeh, 1980; Stevenson and Baker, 1987; Phillips, 1992).

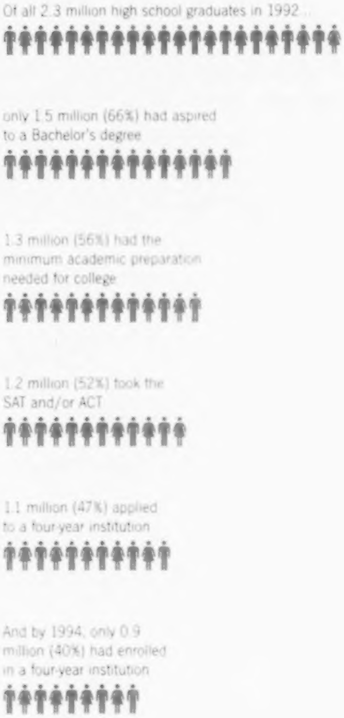
Jencks and Phillips (1998) argue that "black-white differences in parenting practices contribute to the test score gap. Improving parenting skills may, therefore, be as important as improving schools." Coleman and Hoffner (1987) point to social capital as one reason why students in private schools outperform their peers in public schools. These authors contend that community social capital–such as increased attention and support from schools, churches, and other social institutions–can be particularly valuable for children from families where the social or human capital of the parents is weak–i.e., where parents lack either the time or the education to contribute fully to their children's schooling, as is often the case in single-parent and low-income households.

Top-down strategies focus on our political and economic assets. Bottom-up strategies take advantage of our cultural assets—that is, our social capital.

Low-income and minority parents face unique barriers–such as inflexible work hours, lack of English language skills, different expectations of the school role, and lack of confidence interacting

FIGURE 30

Leaks in the Pipeline



Adapted from National Center for Education Statistics, Confronting the Odds (1997), Table 6.

in a culture other than their own—that make their interactions with schools particularly challenging (Basterra, 1998). Educators' understanding and respectful acknowledgment of cultural differences can ease these interactions and are, thus, a decisive factor in the empowerment of minority students (Calderon, 1996).

Intervention programs and community centers such as ASPIRA and National Council of La Raza work to create a more resourceful and successful partnership between parents and schools. Localized and more culturally specific groups play an important role as well. In Arlington County, Virginia, for example, Barrett Elementary School has created a separate PTA—Comité Latino—for the county's large population of recent Salvadoran immigrant families.

Reaching Out to Hispanic Students

There are significant numbers of students who foreclose the opportunity for higher education by setting their sights too low and/or by inaction. As Figure 30 shows, a third of all high school graduates had—*by 10th grade*—ruled out the goal of a bachelor's degree. Whether this decision reflects a realistic assessment by students of their own capability or low expectations set by family, school, or community isn't known, but it does seem that a high proportion of students who do not attend college do not understand the payoff that higher education provides.

Even among those who do aspire to a bachelor's degree, 16 percent do not take the *minimal* set of courses needed to enter higher education. Among those who do get the minimal academic preparation, almost 6 percent do not take any of the admission tests that virtually all four-year colleges require. Eleven percent of those who get as far as taking the SAT or the ACT do not apply to four-year institutions. And of those who do apply, 14 percent do not enroll in a four-year college—even though there currently are enough spaces for almost anyone who wants to attend (NCES, 1997c). About 24 percent of high school sophomores will earn bachelor's degrees before the age of 30; only 4 percent will earn advanced degrees (NCES, 1995).

College-qualified Hispanic students are the only racial/ethnic group significantly less likely than other college-qualified students to take these crucial steps. One study found that, among Hispanic students who *did* take a college entrance examination and applied to a four-year school, four-year enrollment rates were equal to those of college-qualified non-Hispanic Whites (NCES, 1997d). High school graduates whose parents have low levels of income and education could attend four-year colleges at the same rates as students from middle-income families, if they:

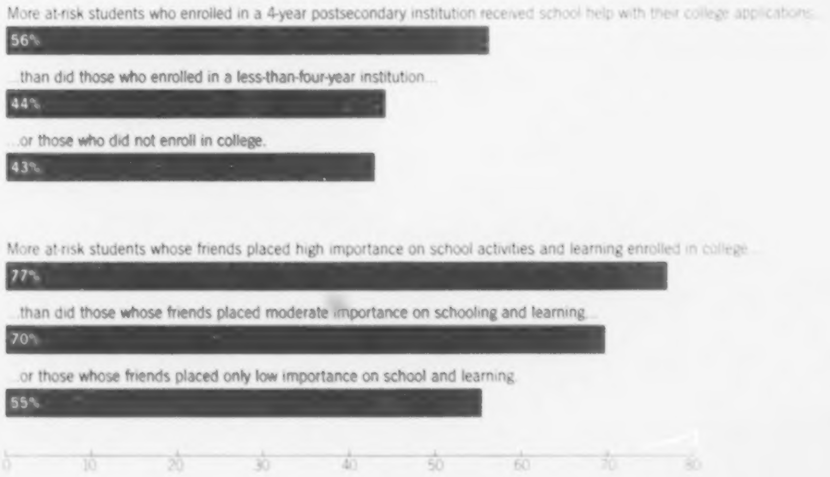
- get at least a minimal academic preparation;
- take an entrance examination; and
- submit an application for admission.

Schools must help students and their parents understand the importance of these steps. Course selection and school counseling that presume that all students should get academic preparation, coupled with school counselors' involvement in the testing and application process, can have a significant impact on increasing minority participation in higher education. Fifty-six percent of at-risk students who enrolled in a four-year college reported receiving school support in filling out their college application, compared to 44 percent of those who enrolled in a less-than-four-year institution and 43 percent of those who had never enrolled (NCES, 1997c; *see Figure 31*).

Schools that presume that all students are college-bound, coupled with school counselors' involvement in the testing and application process, can have a significant impact whether students do in fact head for college.

FIGURE 31

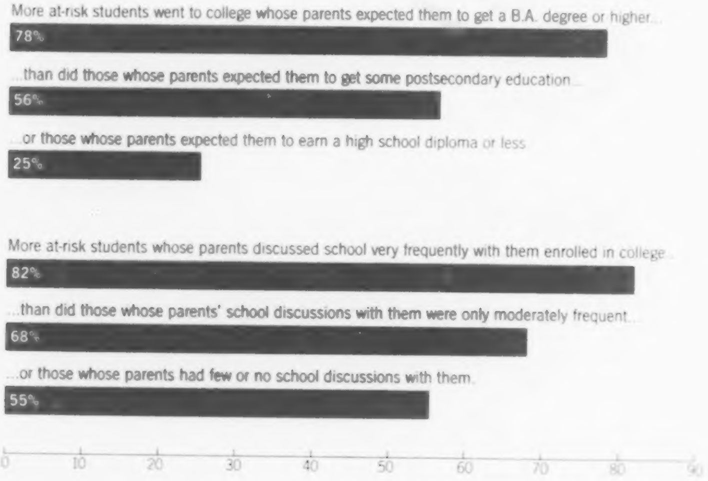
Factors That Affect College-Going of At-Risk Students



Adapted from National Center for Education Statistics, Confronting the Odds (1997), Tables 10 and 15

FIGURE 32

Parenting Factors That Affect College-Going of At-Risk Students



Adapted from National Center for Education Statistics, Confronting the Odds (1997), Table 15

Raising Expectations

Young people tend to become who they expect to be. Students with high expectations perform well; students with low expectations perform poorly. It's that simple.

The expectations of Hispanic youngsters are low relative to other groups. Data from the National Educational Longitudinal Survey (NELS) show that only 55 percent of Hispanic eighth-graders expect to get college degrees, compared to 72 percent of Asians, 68 percent of non-Hispanic Whites, and 64 percent of African Americans.

Young people tend to become who they expect to be. Students with high expectations perform well; students with low expectations perform poorly. It's that simple.

Low educational expectations are especially prevalent among low-income families. Among eighth-grade students surveyed in 1988, 42 percent of those from low-income families aspired to bachelor's degrees, compared to 64 percent of middle-income students and 89 percent of high-income students.

So, to the degree that family and community attributes relate to students' expectations, they contribute directly to students' academic success. Children tend to do well in school when their parents and communities express high expectations for achievement and emphasize the value of education. It is, thus, critical to cultivate high academic expectations, boost self-esteem, and create a supportive environment for at-risk students at home, at school, and in other community institutions.

Progressive teacher colleges and school districts are changing student expectations by treating parents as "fellow learners" with their children.

Specifically:

- Parents' educational expectations have a significant influence on bachelor's degree attainment. More than 78 percent of at-risk[17] students who went to college had parents who expected them to obtain a degree *(see Figure 32)*.
- At-risk students whose parents discuss school with them are more likely to go to college. Eighty-two percent of at-risk students whose parents frequently discussed school with them enrolled in college, compared to 55 percent of students whose parents had few discussions with them.
- At-risk students whose peers value school activities and learning also are more likely to go to college. Among at-risk students, 77 percent of those who reported that all or most of their friends placed high importance on school activities and learning went on to enroll in a four-year college, compared to 55 percent of those whose friends placed low importance on school and learning *(see Figure 31)*.

All of these factors suggest supportive strategies that parents and teachers can use to empower students and help them achieve high school diplomas, make the transition to postsecondary education, and earn college degrees.

Involving Parents

So how do we make it happen?

Traditionally, schools have offered little formal training—either to parents, teachers, or administrators—in how to collaborate and overcome cultural and linguistic differences. Progressive teacher colleges and school districts, however, are demonstrating that such training can help break schools' customary habit of contacting parents only when a child is in trouble or when the school needs help with a bake sale. The new model treats parents as "fellow learners" with their children.

In Tacoma, Washington, for example, at the beginning of each school year, parents attend a program that trains them to participate in child-parent-teacher days.

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[17] Risk factors in this study were identified as low-socioeconomic status, average grades of C or lower, changing schools two or more times between sixth and eighth grade, living in a single-parent household in eighth grade, having one or more older siblings who dropped out of high school, and being held back a grade (NCES, 1997c).

In a more extensive program, the largely Hispanic community of McAllen, Texas, has combined federal, state, and local resources to expand a district-wide family involvement program. The parental involvement staff now includes parent-training specialists at all elementary/secondary schools, and social workers and other staff at secondary schools. Family involvement activities include education programs for parents, school-home communications, volunteer opportunities, home learning, and participation in the parent-teacher organization. At each school, families and teachers create and implement a plan tailored to the needs of the students, parents, and teachers in that school (Columbia's Strong Families Home Page, 1998).

Culturally Sensitive Recruitment and Retention Programs

And what can we do to improve retention?

Retention clearly is the Achilles' heel of postsecondary education in America. Among 25- to 29-year-olds, almost three-quarters of Asian students who start college end up obtaining degrees, but that proportion declines to half for non-Hispanic Whites and less than a third for African Americans and Hispanics. Differing readiness for college accounts for less than half of these differences (Tinto, 1993). Other critical factors apply as well.

Retention–through to college graduation–*begins* with successful transition from high school to college. Transition from high school or work to college is a complex phenomenon, often involving adaptation to new academic and social systems. For all students, the transition to college constitutes a major *disjunction* in their life course. The process is a highly interrelated series of academic, interpersonal, family, and organizational pulls and pushes that shape student learning, persistence, retention, and degree completion.

Retention—through to college graduation—is the Achilles' heel of postsecondary education in America. We must remember that the process begins with successful transition from high school to college.

Inevitably, however, the process is far more of an obstacle course for some students than for others. Compared, for instance, to non-Hispanic White students from college-educated families, first-generation Hispanic students have a much more complicated and challenging adaptation (Rodriguez, 1974-75; Rendon, 1992). For these students, attending college is *not* part of their families' traditions or expectations. And for those who are the first in their immediate family to attend college, it can result in *breaking*, not continuing, family support (Terenzini, et al., 1994).

Other traditions constitute other obstacles. Among many Mexican-American families, boys are afforded more independence than girls. Many Mexican-American (as well as other Hispanic-American) girls, therefore, have to overcome familial resistance—and, often, their own ingrained fears—in order to consider moving away from their hometown to attend college.

The idea that students must shed their history and be absorbed into a single dominant culture not only makes the transition to college particularly difficult for Hispanic students, but it's plain out of sync with the reality of modern life.

In fact, one widely accepted view of successful transition retention programs argues that retention depends on the ability of individual students to separate from their prior cultural identities in order to be incorporated into the college community (Tinto, 1988). But these models of social transition are less useful for students from minority cultures or for students from working class or poor families. While transitions do require an element of separation for all students, an overemphasis on separation can be harmful to minority students and other first-generation college students who are facing the most radical departures from their accustomed community, family, and culture (Rendon, Jalomo, and Nora, 1999).

Moreover, when applied to individuals from minority cultures or low-income families, an emphasis on separation suggests negative stereotypes—that minority, working class, and poor families represent cultures that are destructive rather than supportive of the transition to college and retention through graduation. Enforcing separation as the price of inclusion, therefore, denies individual students the supportive grounding of family, community, and culture—and it denies the education system that support as well.

Even apart from such negative effects, the notion that individual students must shed their history and be absorbed into a single dominant culture is just plain out of sync with the reality of modern life. In modern societies, individuals are socialized simultaneously in multiple contexts. Modern society demands that each of us develop a complex repertoire of cultural affiliations in our personal, spiritual, and working lives. We are each members of many cultures—our circles of friends, co-workers, neighbors, and religious faith members, to name just a few. We are, thus, already and inevitably socialized in multiple contexts, each context influencing the others in complex ways.

In addition, historically at least, the emphasis on minorities' full adoption of the majority culture has placed the responsibility for successful transition and retention exclusively on individuals, rather than identifying the separate responsibilities of individuals and institutions. When students don't succeed in transitioning into the college community, or when they drop out before graduation, the usual assumption is that the student, not the institution, has failed.

In fact, if we are to succeed in the equal-opportunity society we so proudly claim, our schools—from K-12 through colleges and universities—must do their

If we are to succeed in the equal-opportunity society we so proudly claim, our schools must ensure equal opportunity to learn. When they fall short—and fail to attract and retain a diverse student body—they fail not only minority students but majority students as well.

utmost to ensure equal opportunity to learn. When they fall short, and when they fail to attract and retain a diverse student body, they fail not only minority students but majority students as well. The challenge for educational institutions is to help all students prepare for the cultural diversity they will encounter farther on in their personal and working lives, and enable them to negotiate and adapt to changes in today's multiple cultural landscapes.

Transitioning and retaining students successfully through college graduation requires multiple strategies focused on the academic and social needs of individual students within institutional settings. Evidence suggests that if the transition to college can be negotiated successfully, "the likelihood of student change, educational growth, persistence, and successful completion are significantly increased" (Pascarella and Terenzini, 1991).

So what can institutions do to ease the transition of all of their students, particularly nontraditional students and, in our case, Hispanic students?

Terenzini and his colleagues (1994) suggest the following approaches, based on their studies of transition from high school or work to college:

- Design transitional support structures that give individual attention to first-generation college students and students from minority backgrounds;
- Provide early validation to nontraditional students that they can do college-level work, that their ideas have value, and that they are worthy of the attention of faculty, staff, and peers alike (Rendon, 1994);
- Involve faculty members in student orientation programs;
- Orient parents as well as students; and
- Focus transition programs on both in-class and out-of-class experiences.

Tinto (1993) identifies three principles that characterize effective retention programs:

- Putting student welfare ahead of other institutional goals;
- Making a commitment to the education of all, not just some, of their students; and
- Developing supportive social and educational communities in which all students are integrated as competent members.

Encouraging Community-Based Postsecondary Institutions

Some public colleges and universities are doing just this, forging new roles as partners in community problem solving with elementary and secondary schools, often in collaboration with local and regional public and private organizations.

For example, since 1991 the Educational Alliance of Pueblo, a cooperative agreement between the University of Southern Colorado and Pueblo School District No. 60, has focused on improving the quality of education in Pueblo by sharing resources from pre-kindergarten through higher education. This partnership, the USC Center for Teaching and Learning, engages teacher educators, academic discipline specialists, and public school teachers in professional development activities, school-based applied research, teacher induction programs, faculty exchanges, student mentor projects, professional development schools, and future teacher organizations.

If faculty members' core responsibilities include an integrated mix of teaching, research, and community service, we can forge a new role for higher education as a partner in community problem solving.

Another school, the University of Texas at El Paso, has earned a nationwide reputation for ensuring access and success for Hispanic students. Its Mother-Daughter/Father-Son program stands out as an excellent example of collaboration between a university, public schools, and the community at large.

This program began in 1986 when the university, the YWCA, and three El Paso-area school districts agreed to focus together on the educational performance, education, and career aspirations of sixth-grade Hispanic girls, and to work to engage these girls' mothers as role models and advisors.

Over the years, other groups joined the partnership, including El Paso Community College, the El Paso Rotary Club, the local chapter of the American Association of University Women, and the W. K. Kellogg Foundation. The program also expanded to serve boys and their fathers, and its success has prompted similar programs at other University of Texas campuses.

Efforts like these can be enhanced if we redefine faculty members' core responsibilities as an integrated mix of teaching, research, and community service. Faculty incentives—merit awards, promotion, and tenure—should reward not just in-class teaching and applied research, but real service to the community.

Recap: Introducing New Policy Priorities

There are a number of promising strategies for increasing Hispanic educational achievement. If we expand our efforts to include these programs, we will begin to get at the deeper causes of students' frustrated potential.

Thus, there are within our reach a number of promising strategies for increasing educational participation and achievement among the Hispanic Americans whose needs are not currently being met by our education system:

- Support the development of intervention programs, community centers, and school-based organizations that can create a more resourceful and successful partnership between parents and schools.

- Encourage school counseling programs' involvement in the testing and application process of individual students. Insist on a counseling approach that presumes all students will get academic preparation for college.

- Develop family involvement and parent-training programs that can help parents and teachers work together to build academic expectations among Hispanic students.

- Design support structures that give individual attention to first-generation college students and students from minority backgrounds as they transition from high school or work to college.

- Foster the development of cooperative programs between universities, public schools, and the community at large to facilitate school-based applied research, faculty exchanges, and student mentoring programs.

Encourage schools to redefine faculty members' core responsibilities as an integrated mix of teaching, research, and community service.

To date, these strategies have received relatively little attention or support. But if we expand our efforts to include these types of programs, we will begin to address some of the deeper causes of students' frustrated potential.

Conclusion

As the United States prepares for the next century, we stand on the verge of the most sweeping change in our nation's racial and ethnic composition since Europeans first began to explore and settle North America. Our traditional views of "majority" and "minority" will soon be obsolete as the numbers of Asian, African, and Hispanic Americans grow.

These changes are accompanied by an equally significant shift in the requirements of a sophisticated workplace. Our new global economy, with its vastly increased global competition, demands ever-higher levels of education and skill. Those with the least education and fewest skills are doomed to finish last—unless we intervene to make the race fair.

For Hispanics, these issues are particularly important. The growth in population that will soon make them the nation's second-largest ethnic group has not been accompanied by sufficient growth in educational achievement. To rely on a steady-as-she-goes policy would be to perpetuate the status of too many Hispanics—who already face language and cultural obstacles—as second-class citizens.

Money, affirmative action, testing, and bilingual education are all important issues in the education policy dialogue. But deeper challenges lie beyond these high-profile policy debates.

The bottom line is that we must improve educational attainment and achievement among Hispanic youth who are academically at risk if they are to be ready for postsecondary education. And an even larger proportion of Hispanic adults, especially recent immigrants, need academic remediation and job-related education and training if they are going to get and keep good jobs.

Money, affirmative action, testing, and bilingual education are all important issues in the education policy dialogue. But deeper challenges lie beyond these high-profile policy debates.

Helping Hispanic youth overcome academic barriers to success in college will not be enough. We must also help them overcome the human barriers. Ultimately, we will need to engage the energies not just of individual Hispanic students but of Hispanic families, communities, and other social institutions.

The first priority in such an engagement strategy is to unearth the deeper and subtle reasons why so many Hispanics don't enroll or don't finish college. Only by understanding these motivational and situational obstacles can we turn resignation in the face of barriers

We must pay special attention to students who don't succeed in college for want of social support, validation, information, or counseling—and, in no small part, because the rest of us have encouraged the least-advantaged Hispanics to expect less of themselves and for themselves.

into successful efforts to overcome them. We must pay special attention to students who don't succeed in college due to a lack of social support, validation, information, counseling, or good advice—and, in no small part, because the rest of us have encouraged the least-advantaged Hispanics to expect less of themselves and for themselves.

If we focus on these deeper academic and social causes of frustrated potential among Hispanic Americans, our policies will evolve toward less controversial and more surefooted solutions. If we don't—and if we don't aggressively seek to improve Hispanic access to higher education—too many of the nation's fastest-growing population will be left jammed shoulder-to-shoulder in the day-labor hiring halls and minimum-wage jobs at the lower rungs of the economic ladder. And all of us will be denied the fresh perspectives and diverse talents so necessary to reinvigorate the American economic, political, and cultural institutions.

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Appendix: Additional Data on Educational Attainment and Educational Opportunity

TABLE A

Educational Attainment of the Workforce, 1973 and 1997

Percent of the prime-age workforce

	Men			Women		
Educational Attainment	**1973**	**1997**	**% Change**	**1973**	**1997**	**% Change**
High school dropouts						
All students	33.3%	12.2%	-63.5%	30.2%	9.0%	-70.2%
Hispanic students	62.0	42.3	-31.8	54.7	34.2	-37.5
High school graduates (only)						
All students	35.9	32.1	-10.6	46.2	34.2	-26.0
Hispanic students	22.2	27.6	+24.5	31.6	28.6	-9.7
Some college						
All students	12.5	25.6	+104.8	11.5	28.7	+150.5
Hispanic students	9.2	17.7	+92.9	7.5	22.2	+196.0
Bachelor's degree						
All students	9.6	19.2	+100.0	7.3	19.0	+159.3
Hispanic students	3.7	7.7	+105.8	3.8	11.5	+203.1
Graduate degree						
All students	8.7	11.0	+26.4	4.8	9.0	+87.7
Hispanic students	2.9	4.7	+59.7	2.3	3.5	+48.8

ETS analysis of Current Population Survey (March 1974; March 1998).

TABLE B

College-Educated Workers Are Getting a Growing Share of the Economic Pie

Average annual earnings (1996 dollars)

	Men			Women		
Educational Attainment	**1973**	**1997**	**% Change**	**1973**	**1997**	**% Change**
High school dropouts	$29,835	$22,451	-24.8%	$12,049	$12,085	+0.3%
High school graduates (only)	39,212	31,554	-19.5	16,087	18,509	+15.1
Some college	46,218	38,478	-16.8	18,579	23,277	+29.2
Bachelor's degree	56,892	52,817	-7.2	23,087	31,812	+37.8
Graduate degree	58,993	69,947	+18.6	31,116	43,281	+39.1

ETS analysis of Current Population Survey (March 1974; March 1998).

TABLE C

Education and Occupation, 1959–1997

Percent of total employment

Jobs by Function	1959	1969	1979	1989	1995	1997
Farm	4.6%	2.9%	2.2%	1.8%	1.8%	1.5%
Factory	31.7	25.9	24.1	19.4	17.6	17.4
Low-Skilled Services	20.3	18.8	19.8	20.2	21.4	21.1
Hospital and Classroom	10.2	15	14.2	13.9	14.7	15
Office	29.8	33.3	34.9	38.6	38.3	38.3
High-Technology	3.4	4.1	4.9	6.1	6.2	6.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

ETS analysis of 1960 Census and Current Population Survey (March 1970–March 1998).

TABLE D

Among Hispanic Adults, U.S.-Born Tend to be Better Educated Than Foreign-Born

Percent of students for whom level of education is the highest reached

	Size of Group (1,000s)	Less Than High School Diploma	High School Diploma or Higher	Some College or Higher	Bachelor's or Higher	Master's, Professional or Doctorate
Non-Hispanic White	12,463	6.6%	93.4%	63.5%	32.9%	6.0%
Hispanic, by Nativity	2,704	40.0	60.0	32.8	10.9	2.4
Native-born	1,132	22.5	77.5	47.2	15.9	4.2
Foreign-born	1,572	52.6	47.4	22.5	7.2	1.1
Hispanic, by Origin						
Mexican	1,912	45.7	54.3	28.0	8.0	1.9
Puerto Rican	250	29.0	71.0	38.1	10.5	3.7
Cuban	65	11.4	88.6	77.0	43.5	4.9
Central/South American	381	28.4	71.6	41.3	17.8	3.3
Other Hispanics	96	19.5	80.5	50.8	19.0	2.3

ETS analysis of Current Population Survey (April 1998).

TABLE E

Prose Skills of Hispanic and Non-Hispanic White Workers

Age 16 to 64

Occupation	Mean Prose Skill Score Hispanic	Mean Prose Skill Score Non-Hispanic White
Total, all occupations	227	302
Managerial and professional specialty	298	333
Executive, administrative, and managerial	301	326
Professional specialty	296	339
Technical, sales, and administrative support	263	307
Technicians and related support	—	317
Sales	249	304
Administrative support, including clerical	269	306
Services	211	286
Private household	—	288
Protective service	—	304
Services, except household and protective	211	283
Farming, forestry, and fishing	150	273
Precision production, craft, and repair	210	282
Operators, fabricators, and laborers	187	269
Machine operators, assemblers, and inspectors	173	271
Transportation and material moving	215	271
Handlers, equipment cleaners, helpers, and laborers	190	266

— *indicates the sample size was not large enough to produce a reliable estimate.*

ETS analysis of National Adult Literacy Survey (1992).

TABLE F

Hispanic Workers Have Increased Their Educational Attainment But Still Trail Non-Hispanic White Workers

Share of prime-age workers

	1973	1997
Hispanic Workers		
High School Dropouts	59.2%	38.8%
Bachelor's Degrees (and Higher)	6.4	13.5
Non-Hispanic White Workers		
High School Dropouts	27.9	6.7
Bachelor's Degrees (and Higher)	17.0	31.8

ETS analysis of Current Population Survey (March 1974; March 1998).

TABLE G

Race/Ethnicity and Institutional Selectivity

Number of first-time, full-time freshmen

	Number of Students					
Institutional Selectivity	**African American**	**Asian American**	**Hispanic**	**White**	**Other Unknown**	**Total**
4-yr. colleges, universities						
Most competitive *(48)*	2,862	6,110	2,512	31,891	2,200	45,575
Highly competitive *(72)*	4,712	8,600	5,012	65,976	2,650	86,950
Very competitive *(222)*	13,685	18,781	14,262	161,824	6,343	214,895
Competitive *(642)*	44,531	18,451	22,073	339,423	10,927	435,405
Less competitive *(293)*	36,035	5,859	10,439	108,213	3,916	164,462
Non-competitive *(117)*	14,755	1,476	4,260	45,549	1,662	67,702
Other *(414)*	5,560	2,227	4,508	48,406	2,647	63,348
Subtotal *(1808)*	122,140	61,504	63,066	801,282	30,345	1,078,337
2-year colleges and other						
Subtotal *(1349)*	68,380	28,464	59,924	393,107	18,600	568,475
Total *(3157 institutions)*	**190,520**	**89,968**	**122,990**	**1,194,389**	**48,945**	**1,646,812**

Adapted from Nettles, et al. (1997) and Phillippe (1997).

TABLE H

Race/Ethnicity Distribution and Institutional Selectivity

Percent of first-time, full-time freshmen

	Percent of Students					
Institutional Selectivity	**African American**	**Asian American**	**Hispanic**	**White**	**Other Unknown**	**Total**
4-yr. colleges, universities						
Most competitive *(48)*	1.5	6.8	2.0	2.7	4.5	2.8
Highly competitive *(72)*	2.5	9.6	4.1	5.5	5.4	5.3
Very competitive *(222)*	7.2	20.9	11.6	13.5	13.0	13.0
Competitive *(642)*	23.4	20.5	17.9	28.4	22.3	26.4
Less competitive *(293)*	18.9	6.5	8.5	9.1	8.0	10.0
Non-competitive *(117)*	7.7	1.6	3.5	3.8	3.4	4.1
Other *(414)*	2.9	2.5	3.7	4.1	5.4	3.8
Subtotal *(1808)*	64.1	68.4	51.3	67.1	62.0	65.5
2-year colleges and other						
Subtotal *(1349)*	35.9	31.6	48.7	32.9	38.0	34.5
Total *(3157 institutions)*	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Adapted from Nettles, et al. (1997) and Phillippe (1997).

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Anthony Patrick Carnevale

Anthony P. Carnevale

Anthony P. Carnevale

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